

# GEOLOGICAL SURVEY OF ALABAMA

WALTER B. JONES, STATE GEOLOGIST (ON LEAVE)

## MUSEUM PAPER 17

### THE BESSEMER SITE

Excavation of Three Mounds and Surrounding Village Areas  
near Bessemer, Alabama

BY  
DAVID L. DEJARNETTE  
AND  
STEVE B. WIMBERLY



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Prepared with the Assistance of the Work Projects Administration

UNIVERSITY, ALABAMA

1941



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SCALE MODEL OF THE BESEMER SITE

Location of the mounds in relation to the surrounding terrain at time of excavation.

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# THE BESSEMER SITE

## TABLE OF CONTENTS

<i>Chapter</i>	<i>Page</i>
I. INTRODUCTION	1
Topography of the region	1
Site description	2
Previous explorations at the site	3
II. THE CEREMONIAL MOUND	5
Excavation method	6
Structure of the ceremonial mound	7
Material recovered from the ceremonial mound	10
Village area under and around the ceremonial mound	14
Domiciliary features	15
Pits	21
Stone-lined grave near ceremonial mound	21
Dog burial under ceremonial mound	22
	25
III. THE DOMICILIARY MOUND	25
Excavation method	26
Structure of the domiciliary mound	27
Domiciliary features of the domiciliary mound	34
Village areas under and around the domiciliary mound	43
Domiciliary features	45
IV. THE BURIAL MOUND	59
Excavation method	60
Structure of the burial mound	60
Burials and associated cultural material	63
Miscellaneous cultural material	70
V. SUMMARY-ANALYSIS OF THE BESSEMER SITE	71
Mound Complex	71
Architectural Complex	71
Burial Complex	72
Physical Anthropological Study	72
Ceremonial Complex	75
Hunting and Agricultural Complex	77
Economic Complex	78
Pottery Complex	79
Pottery distribution by temper	79
Decorative types	81
Shell-tempered ware	82

## TABLE OF CONTENTS—Continued

	<i>Page</i>
<i>Chapter</i>	
V. SUMMARY-ANALYSIS OF THE BESSEMER SITE— <i>Continued</i>	
Whole or restorable shell-tempered vessels	87
Clay-grit-tempered ware	91
Sand-tempered ware	93
Limestone-tempered ware	95
VI. CONCLUSIONS	99
Culture Pattern and Phase	99
Aspect and Focus	101
Composite trait list, Moundville, Middle Mississippian levels of Tennessee Valley Sites, Bessemer	102
Anomalous Middle Mississippian traits	107
Traits other than Mississippian	108
The Clay-grit- and Sand-tempered Pottery	108
Ethnological note	109
LITERATURE CITED	111
INDEX	113

## LIST OF ILLUSTRATIONS

Scale model of the Bessemer Site—*frontispiece*

ii

## FIGURES

Figure No.	Page
1. Location of the Bessemer Site	xii
2. Excavated areas, Bessemer Site	2
3. The ceremonial mound	5
4. Use of wire grid for profile drawings	7
5. Stone floor under ceremonial mound	8
6. Drawing of stone floor	9
7. Profile, western end of ceremonial mound	11
8. Location of burial in ceremonial mound	12
9. Close-up of burial in ceremonial mound	13
10. Features under and around ceremonial mound	15
11. Features directly under stone floor of ceremonial mound	16
12. Structure Pattern No. 1 associated with ceremonial mound	17
13. Burned timbers, Structure Pattern No. 1	18
14. Structure Pattern No. 2 associated with ceremonial mound	19
15. Structure Pattern No. 3, associated with ceremonial mound	20
16. Structure Pattern No. 4 associated with ceremonial mound	20
17. Stone-lined grave	22
18. Dog burial	22
19. Surface contours, domiciliary mound	25
20. The domiciliary mound	26
21. General view of site operations, domiciliary mound excavation	27
22. Profile through east-west axis, domiciliary mound	27
23. Uncovering the stepped ramp of the domiciliary mound	28
24. The stepped ramp	29
25. Southeast corner of Fill No. 1, domiciliary mound, showing stepped ramp	29
26. Cross section of the stepped ramp	30
27. Fill No. 3 of the domiciliary mound	31
28. Domiciliary mound, Fill Nos. 2 and 3 exposed	32
29. Part of Fill No. 4	33
30. A typical structure pattern corner	35
31. A typical structure pattern	36
32. Typical baked-clay fire basin	37
33. Structure patterns on Fill No. 1	38
34. Structure patterns on Fill No. 2	39
35. Structure patterns, Fill No. 2	40
36. Part of Fill No. 5	41
37. Structure patterns under and around domiciliary mound	44
38. Stone heap under domiciliary mound	46
39. Village area northwest of domiciliary mound	47

## LIST OF ILLUSTRATIONS—Continued

<i>Figure No.</i>	<i>Page</i>
40. Village area east of the domiciliary mound .....	48
41. Structure Pattern No. 1, northwest village area .....	49
42. Structure Pattern Nos. 2, 3, and 4, northwest village area .....	50
43. Structure Pattern Nos. 5, 6, 7 and 8, northwest village area .....	52
44. Structure Pattern No. 8, northwest village area .....	53
45. Stockade or enclosing fence pattern, east village area .....	55
46. Reconstruction of stockade, or enclosing fence, and associated structure .....	56
47. Red clay floor and fire basin, Structure Pattern No. 14, east village area .....	57
48. The burial mound .....	59
49. Profile through east-west axis of burial mound .....	60
50. Surface contour of Fill No. 1 of the burial mound .....	61
51. East corner of double stockade pattern around Fill No. 2 of the burial mound .....	62
52. Profile through burial mound showing soil difference of two fills .....	62
53. Horizontal outline of burial mound showing burial placement .....	63
54. Burial Nos. 1, 2 and 3 .....	64
55. Burial Nos. 6, 7, 8 and 9 .....	66
56. Burial No. 20 .....	69
57. Front and side views of skull of Burial No. 6 in burial mound .....	75
58. Ceremonial objects of stone, shell and copper .....	76
59. Mississippian points found at the Bessemer Site .....	77
60. "Woodland" points found at the Bessemer Site .....	78
61. Stone implements .....	79
62. Shell-tempered ware: Warrior Plain and Moundville Incised .....	85
63. Shell-tempered Ware: Moundville Filmed and Moundville Filmed Incised .....	85
64. Restored shell-tempered vessels .....	86
65. Vessel forms, whole vessels from the Bessemer Site .....	88
66. Rim profiles, shell-tempered ware .....	88
67. Restoration and reconstruction of Vessel No. 13 .....	90
68. Clay-grit-tempered ware .....	93
69. Rim profile, clay-grit-tempered ware .....	93
70. Sand-tempered ware .....	94
71. Rim profiles, sand-tempered ware .....	95
72. Limestone-tempered ware .....	96
73. Similarity of clay-grit, sand- and shell-tempered ware .....	109

LETTER OF TRANSMITTAL.

University, Alabama  
June 1, 1941

Honorable Frank M. Dixon,  
Governor of Alabama,  
Montgomery, Alabama

Sir: I have the honor to transmit herewith the manuscript of a report on "The Bessemer Site, Excavation of Three Mounds and Surrounding Village Areas near Bessemer, Alabama", by David L. DeJarnette and Steve B. Wimberly. It is requested that this be printed as *Museum Paper* 17 of the Alabama Museum of Natural History.

Respectfully,

STEWART J. LLOYD,  
Asst. State Geologist.



## PREFACE

This report is the third of a series of museum papers dealing with the prehistory of Alabama and describes the excavation of three mounds in the north-central part of the state.

Investigations at this site were started in 1934 in conjunction with a six-weeks course in American archaeology which Birmingham-Southern College was offering under Dr. Carl E. Guthe of the University of Michigan. Dr. Guthe directed student excavations on the largest of the three mounds as a complementary part of his lecture course. At the end of Dr. Guthe's course the Alabama Museum of Natural History continued the excavation, completing work on the largest mound in June, 1935.

In July, 1939 the Museum resumed work here and excavated the other two mounds, concluding the site investigation in October, 1940.

The Civil Works Administration furnished labor during the 1934-35 period of excavation, and the Work Projects Administration furnished labor and supplies during the 1939-40 period. The cooperation of these federal agencies is gratefully acknowledged.

The Museum is indebted to the Birmingham Anthropological Society, especially Mr. E. C. Horton and Mr. E. M. Chapman, for initiation of the Bessemer Mound investigations; to Dr. Carl E. Guthe for initial direction of the excavations, and guidance and advice after it was necessary for him to leave; to Birmingham-Southern College, especially Dr. Russell Poor of the Geology Department, for cooperation with Museum activity at the site; to the Tennessee Coal, Iron and Railroad Company for permission to excavate on company property; and to Mr. F. M. Joy, Manager of the Land Department, Tennessee Coal, Iron and Railroad Company, for sustained interest and courteous cooperation throughout the excavations.

David L. DeJarnette

Steve B. Wimberly

University, Alabama  
May 28, 1941

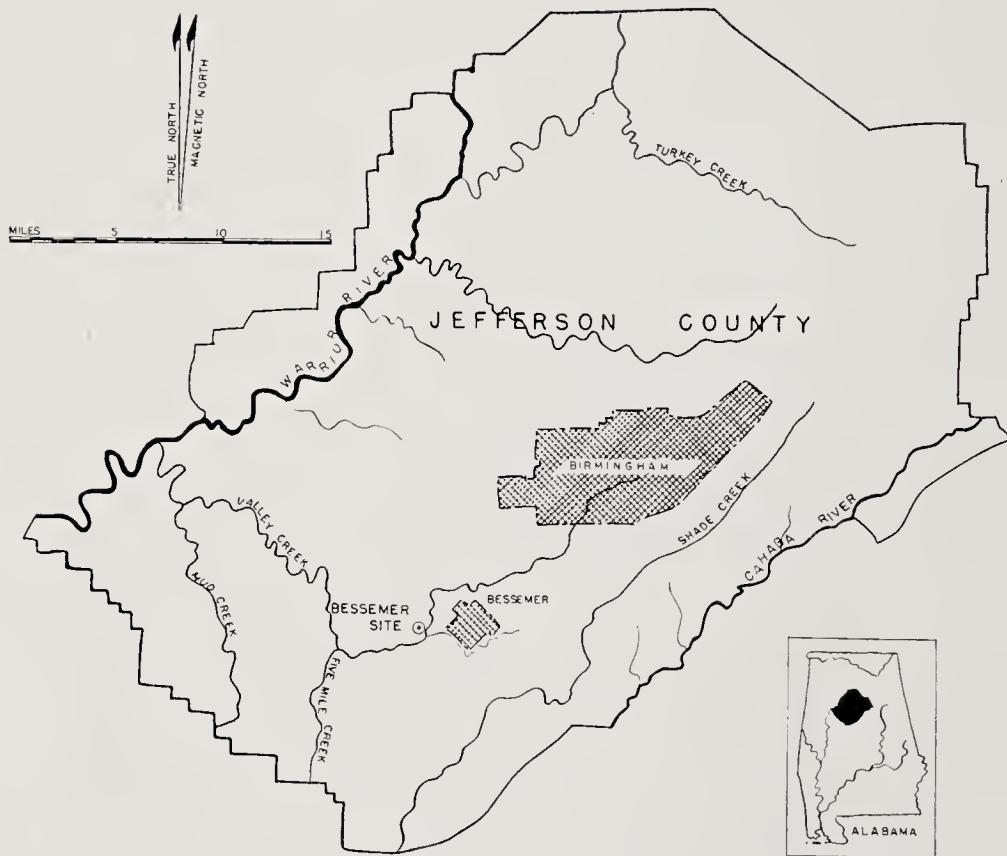


Figure 1. Map of Jefferson County, Alabama, showing location of the Bessemer Site. Inset shows location of Jefferson County in North-Central Alabama.

# THE BESSEMER SITE

## CHAPTER I

### INTRODUCTION

One and one-half miles west of the city of Bessemer, Alabama in the central part of the south half of the northwest quarter of section 8, township 19 S, range 4 W, Jefferson County, was a mound group comprised of a large ceremonial mound, a square domiciliary mound, and a small burial mound. The land on which the mounds were located belonged formerly to Mr. N. D. Talley, and the mounds were once known as the Talley Mound Group. This report describes the excavation of these mounds and the village area surrounding them.

#### *Topography of the Region*

The mounds were situated in a bend of Valley Creek about twenty-five miles above the confluence of this creek and the Warrior River. (*See Figure 1.*) Valley Creek drains the southwestern part of Jones Valley. This valley, located at the lower end of the Appalachian Plateau in the north-central part of Alabama, is anticlinal, its geological formations ranging from early Cambro-Ordovician limestone to the later Pennsylvanian coal measures. Within the valley and the low mountains surrounding it is a unique concentration of limestone, dolomite, hematite, and coal. This convenient supply of all materials necessary for the production of iron and steel is responsible for the development of two important industrial centers in the district, Birmingham and Bessemer.

During a period of alluviation in geologic times Valley Creek deposited a valley fill which, with subsequent degradation of the stream, eroded and left numerous isolated hillocks over the flood plain. On these hillocks, which are apparently terrace remnants, the aborigines constructed their mounds.

Valley Creek at present is incised fifteen to twenty feet below the flood plain, but it is reasonable to assume that during the period of aboriginal occupancy the creek was less deeply entrenched and consequently more apt to overflow its banks. The hillocks on which the mounds were constructed would afford natural protection during periods of inundation.

In the vicinity of the mounds sandy loam topsoil overlies red clay subsoil which in turn overlies limestone bedrock. The sandy soil, easily cultivated, would give satisfactory response to even the crudest agricultural methods.

Intense industrialization of Jones Valley has polluted Valley Creek with waste matter from by-product plants, but early residents report that the stream once abounded in fish. The valley itself abounded in wild game. This region, then, would afford its aboriginal occupants bountiful sustenance from hunting, fishing, and agricultural pursuits.

#### *Site Description*

Location of the mounds in relation to the surrounding terrain at the time of excavation is shown in the frontispiece. The ceremonial mound had a central position in the group. The burial mound was 300 feet southeast of it, and the domiciliary mound 400 feet southwest.

One village area was excavated in association with the ceremonial mound, and two village areas in association with the domiciliary mound.



Figure 2. The Bessemer Site. Excavated areas, except for numerous test-pits, outlined.

At the time of the first excavation period in 1934, when the ceremonial mound was excavated, land surrounding the mounds had been under cultivation for forty or fifty years. The mounds themselves had not been cultivated and were covered with large deciduous trees and low shrubs. All of the mounds were cleared of vegetation in 1934, after which the surfaces of the domiciliary mound and the burial mound were cultivated along with the surrounding area for five years, or until the beginning of the second period of excavation in 1939.

#### *Previous Explorations*

Local residents report previous explorations into the mounds in search of gold, and numerous auger holes attest these reports, but the only recorded investigations prior to the excavations described in this publication were made by Cyrus Thomas, who wrote as follows in 1890:

Near Jonesboro is a small group of mounds on the plantation of Mr. N. D. Talley, Sec. 8, T. 19 S., R. 4 W., of the Huntsville meridian. The valley of the small creek that flows along the northern and eastern sides of the field in which the group is located is quite wide at this point, the round knob-like hills which form its boundary standing at quite a distance from the mounds.

The surface of the field immediately around the mounds is comparatively flat, pitching in a steep bank to the water, a few feet north of Mound No. 1 [the small burial mound]. Northeast of this mound the surface has the appearance of having been dug or more probably washed out by the creek. East of Mound No. 3 [the domiciliary mound] is what might be called the first bottom land, about 4 feet lower than the surface of the field. This point is above the overflow of the small creek, while farther down the valley the land is frequently inundated and had been under water a short time previous to examination.<sup>1</sup>

Mr. Thomas described the burial mound and his investigation of it as follows:

No. 1 is an oblong mound, measuring 30 feet east and west, and about 4 feet high at the highest point. A few small pine and hackberry trees have grown on the sides since it was built. It is made of the same red, sandy soil as that found in the field in which it stands. Only a few coals and a shovelful of ashes were found in it, which had probably been thrown there at the time it was built and may have

<sup>1</sup>Thomas, Cyrus, "Mound Explorations", *Bureau of American Ethnology Twelfth Annual Report*, p. 290.

been scraped up from the surface of the field with the rest of the material for the mound, but in hunting the field over for any specimen that might have been washed out or plowed up no ash beds were seen, nor did any of the tenants of the land remember plowing through such beds.<sup>1</sup>

Continuing his observations, Mr. Thomas gave the following description of the ceremonial mound:

No. 2 has the appearance of an oval platform with a small mound on one end of it. The longer diameter of the base of the platform is about 140 feet, the greatest width 100, and the height 5 ft. The height of the upper mound, which is on the smaller end of the platform, is 7 feet, the diameter of the flattened top 30 feet. Its western slope is continuous with that of the platform. The figure shows the ground plan and the section through a b. The upper mound has been considerably torn up by treasure hunters, but scattered over the top was a large quantity of burnt clay, much of which bore the impression of a stamp made apparently of split cane. A trench lengthwise through the platform showed that the top layer consisted of 4 feet of red, sandy soil, evidently taken from the surface of the surrounding field; the remainder, to the original surface of the ground, of pure river sand. The upper mound was composed of sandy soil down to the platform, and hence it is reasonable to conclude that it was built at the same time the upper layer was placed on the platform. No bones, ashes, charcoal, or vestiges of art were observed in any part.<sup>2</sup>

Mr. Thomas concluded his observations with the following notation regarding the domiciliary mound:

No. 3 is a circular mound, about 110 feet in diameter at the base and 60 feet across the top, which is flat; height, 8 feet. A trench across it through the center showed that it was constructed of sandy soil from the surrounding field. In the central portion, about half way down, was a layer of clear river sand 3 inches thick and about 5 feet in diameter. Nothing else was found in it.<sup>3</sup>

---

<sup>1</sup>*Ibid.*, pp. 290-291.

<sup>2</sup>*Ibid.*, pp. 291-292.

<sup>3</sup>*Ibid.*, p. 292.

## CHAPTER II

### THE CEREMONIAL MOUND

The ceremonial mound was oval in shape with a relatively flat top and a truncated knob at its smaller or western end. Its major axis ran approximately east-west.

The base of the mound measured 130 x 102 feet, and the top, including the portion on which the knob rested, measured 90 x 55 feet. The major portion of the mound was 10 feet high, while the knob added 8 feet to its western end, giving a maximum height of 18 feet.

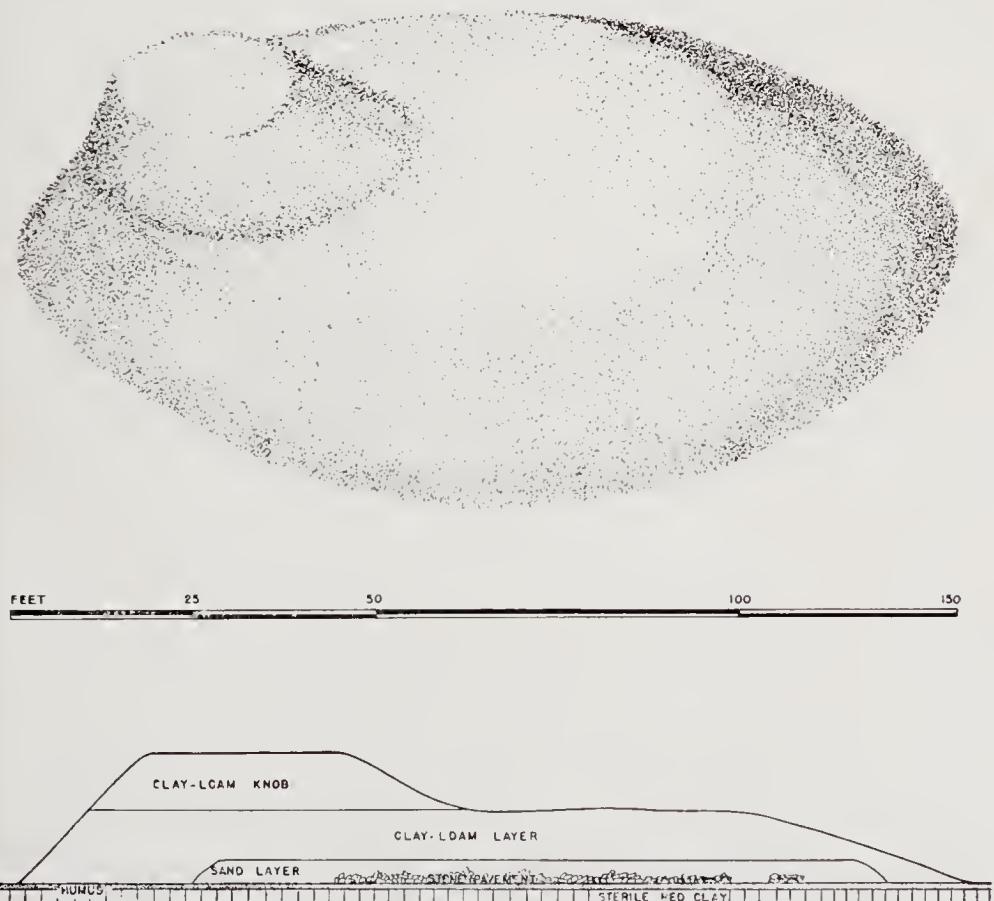


Figure 3. The ceremonial mound.

The surface contours of the entire mound were quite well defined. This was probably due, in part, to the fact that the mound had never been cultivated. The trench put down by Cyrus Thomas in 1890, described in the introduction, was discernible, as were also numerous pits put down in the top and sides of the mound by treasure-seekers. A small portion of the western slope had been isolated by the TCI railroad, which had cut through the western periphery.

#### Excavation Method

After the mound was cleared of trees and brush it was staked off in 5-foot squares. Identification of each square was derived by reference to a north-south and an east-west axis.

Excavation was started at the western or higher end of the mound by putting down a long trench 5 feet from and parallel to the railroad track. The east wall of this trench was carried vertically into the mound until the top of the knob was reached, leaving exposed a profile 20 feet high. Trenches were then put down along the north and south sides of the mound, and the south and north walls of these trenches were carried into the mound until stratigraphy was clearly discernible. At this point a vertical wall was cut into the east side of the mound. These four vertical cuts outlined a rectangular block 70 feet east-west by 60 feet north-south.

The next stage of excavation was the cutting away of the truncated knob by horizontal slicing. As the knob was being cut away the exposed surfaces were carefully studied, but no domiciliary or other features were evident.

After the knob had been removed, vertical cutting, combined with horizontal slicing, was employed to excavate the remaining portion of the mound.

The drawing of profiles was simplified by the use of a wire grid fastened to a wooden frame 10 feet long and 6 feet high. The grid was screened off in 1-foot squares and could be placed against any portion of a profile.



Figure 4. North-south profile through western end of ceremonial mound. Wire grid used for drawing profiles. *Field photograph, December 8, 1934.*

### Structure of the Ceremonial Mound

The mound was built on a humus layer (sandy loam) under which red clay subsoil extended 2.5 feet to hardpan.

Construction phases of the mound were represented by a stone pavement at the base, a layer of sand covering the pavement, a fill of clay making up the major portion of the mound, and finally the knob of clay at the western end of the mound. These four divisions of the mound will be called "fills". The base of the mound will be described first, followed by descriptions of succeeding fills in the order of their upward occurrence.

**Fill No. 1.** The first stage of construction was represented by a layer of stone which had been placed on the topsoil, and formed the base of the mound. The stones consisted of slabs and large irregular fragments of limestone<sup>1</sup>, apparently weathered talus material, taken from near-by outcrops along Valley Creek. This "stone pavement" covered an area approximately 95 x 80 feet, being longest northwest-southeast. (*See Figure 5.*)

<sup>1</sup>*Ketona dolomite*, a carbonate of magnesium and calcium so pure that it is very close to theoretic dolomite.



Figure 5. Stone floor of ceremonial mound completely uncovered. Looking northward. *Field photograph, May 11, 1935.*

The stones had been quite levelly laid but their irregular thickness gave the pavement a very uneven surface. Most of the stones averaged, roughly, 0.8 foot in diameter, their thickness varying from 0.1 foot to 1.8 feet.

The stones were too uneven and irregular to have served as a house floor. There were narrow areas containing no stone, but these areas did not seem to contribute to any outline of an effigy or design.

**Fill No. 2.** Entirely covering the stone pavement was a layer of sand.

The sand layer measured 120 feet east-west by 85 feet north-south, extending almost out to the edges of the final mound. It was 3 feet thick.

The sand, white and fine-textured, had been taken from the bed of Valley Creek. The flat top of the sand layer was well



Figure 6. Stone floor at the base of the ceremonial mound.

packed and was streaked to a depth of 3 inches with charcoal and ashes. The whole layer showed evidence of loading.

**Fill No. 3.** The third construction phase was represented by a fill which entirely covered the sand layer and made up the surface of the final mound (except for the western knob).

The top of *Fill No. 3* was 90 feet east-west and 55 feet north-south.

Construction of this third fill had added 7 feet to the height of the mound, giving the mound proper (excluding the knob) a final height of 10 feet above the old humus layer.

*Fill No. 3* was made up of definite loads of red clay and loam and a few lenses of white sand and yellow clay. The upper 8 inches contained considerable humus and charcoal except at the western end where the base of the truncated knob rested. Here the layer of humus and charcoal was faintly discernible and evidenced the lapse of a short period of time between the construction of the mound proper and the knob.

**Fill No. 4.** The fourth and final construction stage was represented by a knob at the western end of the final mound. The knob had a round top and an oval base. The slope of its western side was a continuation of the western slope of the mound proper. The north and south sides of the knob extended upward from just within the northwest and southwest edges of the mound proper. The eastern side, sloping more gradually than the other sides, extended up from the center of the mound proper and may have been used as an approach to the topmost part of the mound, the summit of the knob.

The knob was 8 feet high. Its round top measured 28 feet in diameter and its oval base measured 48 x 36 feet. The major axis of the knob, like that of the mound proper, ran east-west.

The knob was made up of distinct loads of clay, loam, and sand similar to the construction material of *Fill No. 3*.

#### **Material Recovered From the Ceremonial Mound**

The mound contained one burial, scattered potsherds and stone artifacts, fresh-water shells, and charcoal. Occurrence of these items by level may be summarized as follows:

*Material Recovered from Ceremonial Mound*

Level	Burial	Pot-sherds	Artifacts	Fresh-water Shell	Charcoal
Stone Pavement .....	.....	24	.....	.....	.....
Sand Layer .....	.....	.....	.....	.....	present
Clay-loam Layer .....	1	317	18	present	present
Clay-loam Knob .....	....	88	22	present	present



Figure 7. North-south profile through western end of ceremonial mound. Half of the truncated knob has been cut away. *Field photograph, January 4, 1935.*



Figure 8. Location of the one burial in the ceremonial mound, showing part of the stone pavement, the mound proper, and the knob at the western end of the mound. Looking northward. *Field photograph, February 1, 1935.*

**The Burial.** The burial was under the south slope of the knob, three feet below the surface of the clay-loam layer or the mound proper. It was inclusive in the clay-loam fill, evidently having been placed there during mound construction. The burial was that of a young adult female, and yielded one of the two measurable skulls found at the Bessenier Site. The skeleton was lying in a partly flexed position on the left side, with the left hand under the chin and the knees drawn up to the left elbow. It was oriented with the head to the east, the face to the south. Two shell-tempered pottery vessels had been placed at the head. A two-handled jar of plain ware lay a few inches from the face, while a crushed jar lay at the right shoulder. Detailed studies of the burial are given in *Chapter V.*

**Miscellaneous Cultural Material.** Potsherds were scattered between the rocks of the stone pavement at the base of the mound, and throughout the clay-loam layer and knob. In addition to potsherds a small chert blade or knife and a broken greenstone

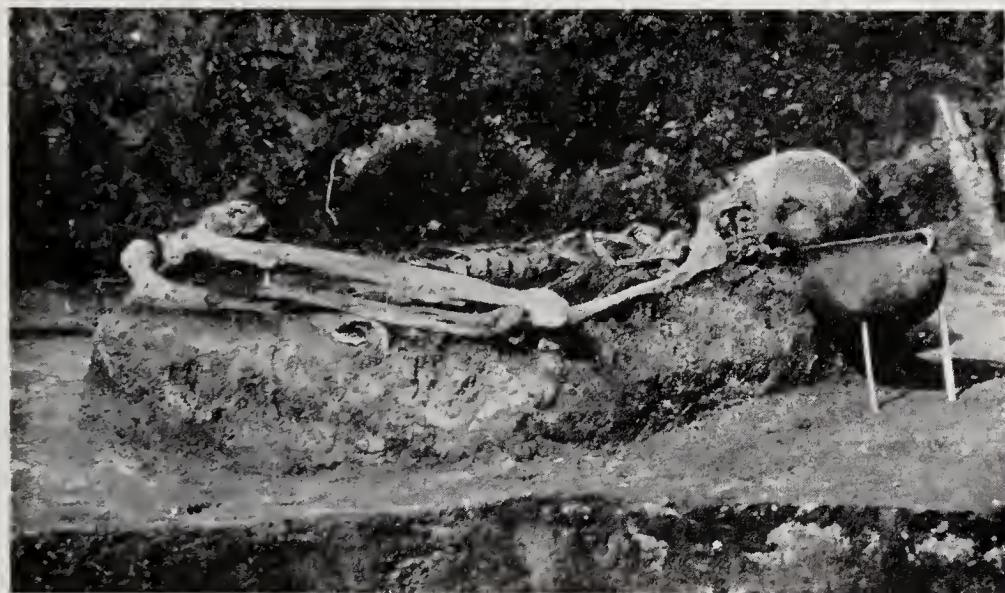


Figure 9. Close-up of the one burial in the ceremonial mound. A partly flexed, adult female with shell-tempered pottery associated. Inclusive in the mound fill. This burial yielded one of the two measurable skulls found at the Bessemer site. *Field Photograph, February 1, 1935.*

celt were found in the knob. Miscellaneous cultural material in the clay-loam layer was as follows:

abrader or smoothing stone, sandstone	1
blade or knife, flint	1
celt, greenstone	1
eelts, fragments of, greenstone	4
discoidal <sup>1</sup> pottery	1
discoidals, sandstone	2
lapstone, sandstone	1
ochre, red and yellow	fragments
pestle, quartz cobblestone	1
projectile points, stemmed	3
projectile points, triangular	2
trowel, pottery	1

Small pieces of charcoal were scattered throughout the knob, over the top of the clay-loam layer, and over the surface of the sand layer.

Detailed studies of the potsherds, artifacts, and shells scattered through the mound, as well as descriptions of the two vessels which accompanied the burial, are given in *Chapter V.*

*VILLAGE AREA UNDER AND AROUND THE  
CEREMONIAL MOUND*

In the old humus layer under and around the ceremonial mound the following domiciliary features, pits and burials were found:

complete structure patterns . . . . .	4
clay seat (associated with structure pattern) . . . . .	1
fire basin (associated with structure pattern) . . . . .	1
pit (associated with structure pattern) . . . . .	1
pits (unassociated) . . . . .	2
stone grave . . . . .	1 (2 burials)
dog burial . . . . .	1

There were in addition to the traceable structure patterns a number of scattered post holes which did not contribute to any pattern.

Artifacts found under the ceremonial mound were as follows:

abrader, sandstone . . . . .	1
blade or knife, chert . . . . .	1
celt, greenstone . . . . .	1
celt, fragment of, sandstone . . . . .	1
hoe, fragment of, greenstone . . . . .	1
lapstone, sandstone . . . . .	1
projectile points, stemmed . . . . .	2
projectile points, triangular . . . . .	2

Detailed descriptions of these artifacts are given in *Chapter V.*

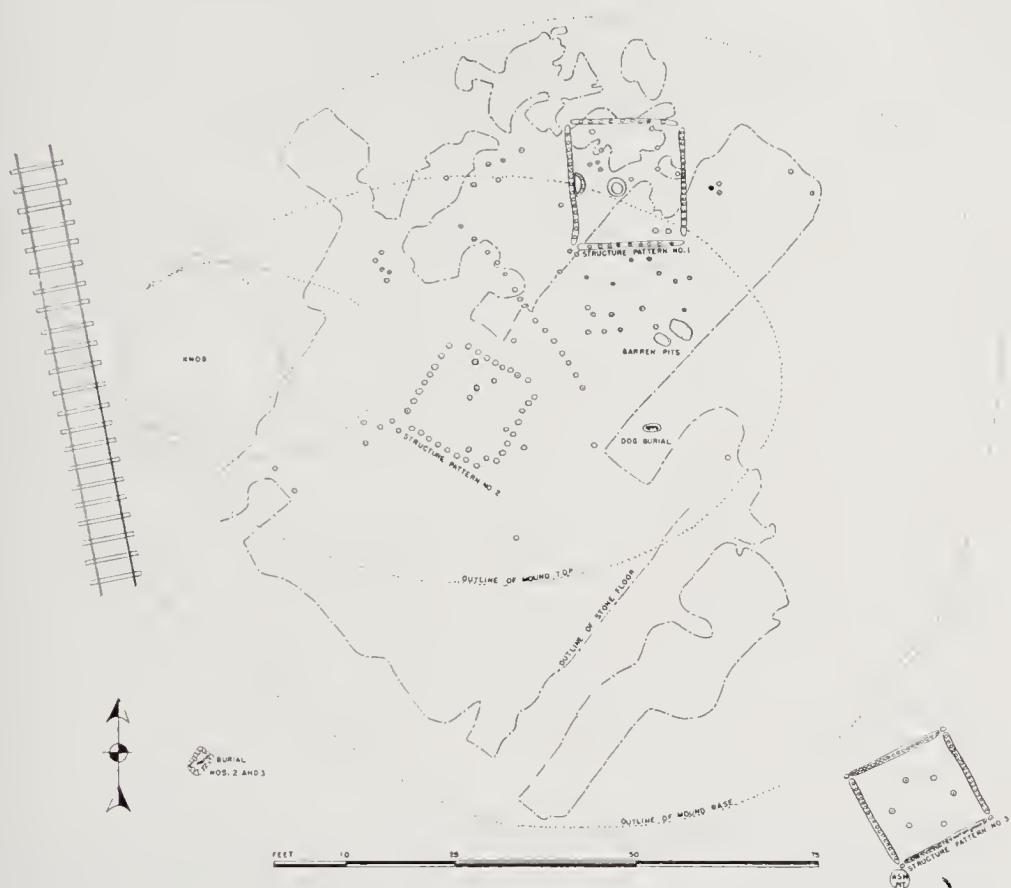


Figure 10. Features under and around the ceremonial mound.

#### Domiciliary Features, Village Area Under and Around the Ceremonial Mound

**General Description of Structure Patterns.** All of the structure patterns found under and around the ceremonial mound were square or rectangular. Two of the patterns were made up of entrenched post molds, one was made up of wall trenches containing no post molds, and one was made up of individually set post holes.<sup>1</sup> Wall trenches were nonconvergent and left gaps approximately 0.5 foot wide at each corner of the wall-trench pattern. Some of these corner gaps contained individually set post holes. Post molds in all of the wall trenches were about 0.6 foot apart.

<sup>1</sup>The terms *post hole* and *post mold* are intended to differentiate two aboriginal construction techniques represented by *holes* actually dug and *molds* left by the decay of posts in the tamped earth of a trench.

All of the wall trenches were of approximately the same width and depth and all of the post molds were of approximately the same diameter and depth. With few exceptions the post holes, also, were of uniform size. Average measurements were as follows:

wall trenches
width — 0.7 foot
depth — 1.0 foot
post molds
diameter — 0.4 foot
depth — 1.0 foot
post holes
diameter — 0.5 foot
depth — 1.5 feet

**Structure Pattern Distribution.** Under the mound were two structure patterns: *Structure Pattern No. 1*, under the northern extremity of the mound, and *Structure Pattern No. 2*, directly under the center of the mound. Outside the mound were two more structure patterns: *Structure Pattern No. 3*, which was 3 feet southeast of the mound, and *Structure Pattern No. 4*, which was 60 feet north of the mound.



Figure 11. Domiciliary features in humus layer directly under stone floor of ceremonial mound. Dog burial in right foreground. Looking northward.  
Field photograph, June 6, 1935.

*Structure Pattern No. 1*

This was the largest and most elaborate of the four patterns found in association with the ceremonial mound. It was an entrenched-post-mold pattern under the northern extremity of the mound. It measured 18 feet north-south and 16 feet east-west.

Just outside the southwest corner of the pattern were two individually set post holes. In the southwest corner of the pattern were two post holes. In the north half of the pattern were ten more post holes in no special arrangement.

In the center of the pattern was a baked-clay fire basin filled with ash and charcoal. It was circular, 2.3 feet in diameter, with a raised rim approximately 0.2 foot high.

A raised seat made of hard-packed red clay was just inside the center of the west wall trench. It was flat-topped and semi-circular, with the straight side lying against the house wall. The circular edge was beveled. The seat extended a maximum distance of 1.5 feet from the house wall, was 3.0 feet in maximum width, and 0.8 foot high.

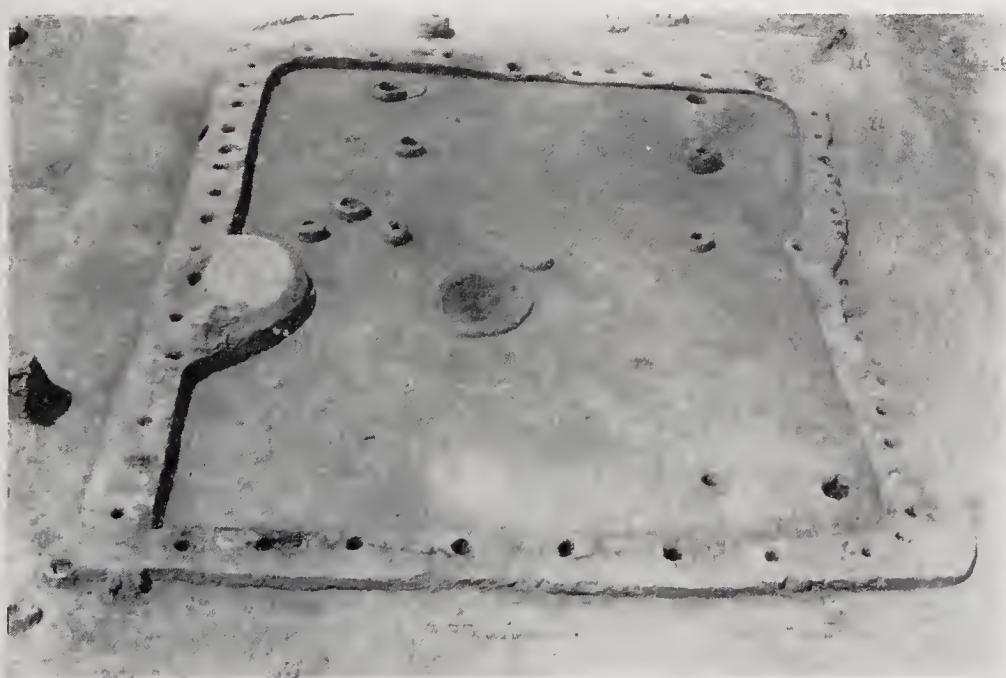


Figure 12. *Structure Pattern No. 1* under the ceremonial mound, showing interior post holes, clay seat and fire basin. Looking northward. *Field photograph, June 10, 1935.*

Pieces of charred wood and cane on the floor, and the floor itself, discernible as a burned and blackened area, gave evidence that the structure had been burned.



Figure 13. *Structure Pattern No. 1 before removal of burned timbers. Looking westward. Field photograph, June 6, 1935.*

#### *Structure Pattern No. 2*

This pattern was made up of individually set post holes. It was approximately 14 feet square and oriented intercardinally directly under the center of the ceremonial mound. Its southeast lines curved slightly outward, but the others were quite straight.

There were 8 post holes on each side, making a total of 32. They were spaced approximately 1.5 feet apart.

Within the east half of the pattern and showing no special arrangement were 6 post holes which were slightly larger than those in the pattern lines, having an average diameter of 0.6 foot and a depth of 1.7 feet.



Figure 14. *Structure Pattern No. 2*, a rectilinear post-hole pattern under the ceremonial mound. Looking northeast. *Field photograph, May 31, 1935.*

#### *Structure Pattern No. 3*

This was another entrenched-post-mold pattern—square, its corners nonconvergent. It was located 3 feet southeast of the ceremonial mound and was oriented intercardinally. It measured 15 feet on each side.

In each corner of the pattern was a post hole and in the center of the pattern was a group of post holes arranged to form a circle 8 feet in diameter.

Outside the south corner of the pattern was a circular pit containing ashes, burned clay, and a few fragments of burned limestone. The pit was 3.6 feet in diameter and 2.3 feet in depth.

#### *Structure Pattern No. 4*

This pattern was made of 4 nonconvergent wall trenches, none of which contained post molds. It was located 60 feet north of the ceremonial mound and was cardinally oriented, measuring 14 feet on each side.

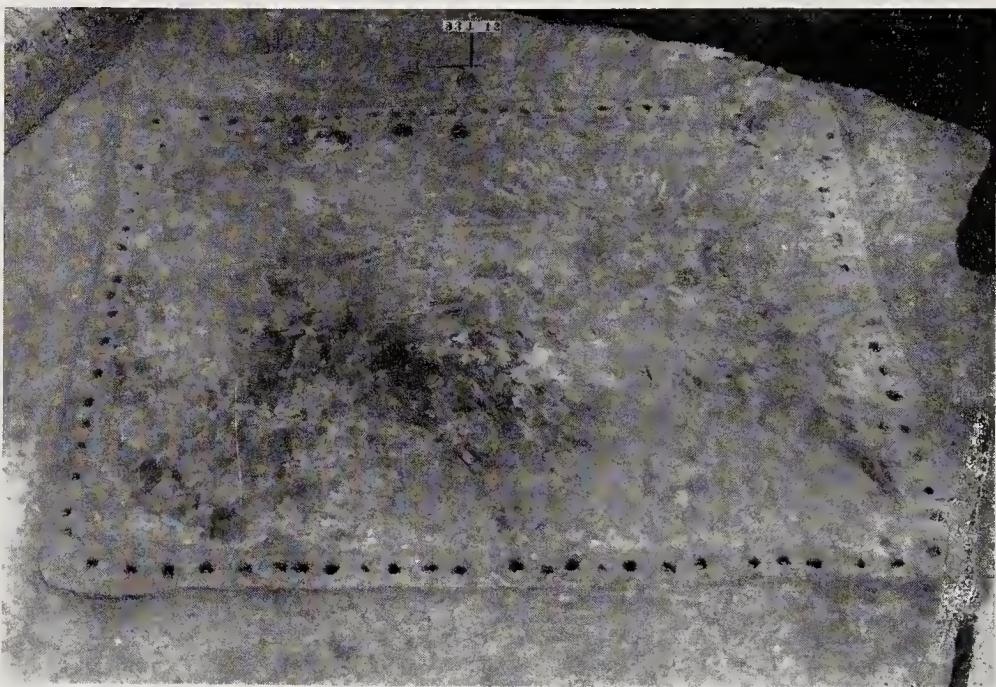


Figure 15. *Structure Pattern No. 3*, a rectilinear entrenched-post-mold structure 3 feet southeast of the ceremonial mound. Looking southeast.  
*Field photograph, May 30, 1935.*



Figure 16. *Structure Pattern No. 4*, outlined by wall trenches containing no post molds. This pattern was 60 feet north of the ceremonial mound.  
*Looking northeast. Field photograph, April 17, 1935.*

At the northwest corner gap were two post holes and at the southwest corner gap one post hole.

Three feet east of the center of the pattern was a center post hole around which seven other post holes formed a circle approximately 10 feet in diameter.

#### Pits under and around the Ceremonial Mound

In addition to the ashpit described in association with *Structure Pattern No. 3* (outside the mound) there were 2 shallow, barren pits under the mound, 8 feet south of the southeast corner of *Structure Pattern No. 1*. These pits were approximately 0.8 foot deep. The more northerly one measured 2.5 x 1.3 feet, and the other 1.5 x 1.0 foot, long axes running northwest-southeast.

#### Stone-lined Grave near Ceremonial Mound

The stone-lined grave was 12 feet southwest of the ceremonial mound. It contained the disarticulated skeletons of two individuals—an adolescent female and an adult male.

At the time of burial some attempt had been made toward rearticulation of the bones, especially those of the vertebral columns. The male skeleton had been laid directly on top of the female. All of the bones were oriented east-west except the distal end of the right male femur, which lay at right angles to the other bones. Detailed studies of the burials are given in *Chapter V*.

The pit was roughly rectangular in shape, measuring 3 x 2½ feet. Its long axis ran northeast-southwest. It was about 2 feet deep and extended from the old humus layer down to red clay subsoil. Its sides were lined with irregular slabs of limestone identical to the limestone in the stone floor of the mound. The interior of the pit, within the stone lining, measured 1 x 1½ feet.

#### Dog Burial under Ceremonial Mound

The fully articulated skeleton of a small dog, lying extended on the right side, head to the west, was found buried in the old



Figure 17. The stone-lined grave containing two reburials. Twelve feet southwest of the ceremonial mound. *Field photograph, November 1, 1934.*



Figure 18. Dog burial under stone floor of ceremonial mound. *Field photograph, June 6, 1935.*

humus layer under the stone floor of the ceremonial mound. It had been placed in a shallow, oval pit that measured 1.2 feet north-south and 2.0 feet east-west.

Near the pit was one bit of charred corncob.



## CHAPTER III

### THE DOMICILIARY MOUND

The domiciliary mound was a truncated pyramid 11 feet high. Its top was 60 feet square and its rounding base measured approximately 120 feet in diameter. The north, south, and east sides were relatively steep. The west side sloped more gradually, and from the northwest summit of the mound a shallow depression ran westward to the base. This depression was 5 feet wide and 1 foot deep at the time of excavation, but part of this depth was due to recent erosion. The depression may have been used as an approach to the top of the mound.

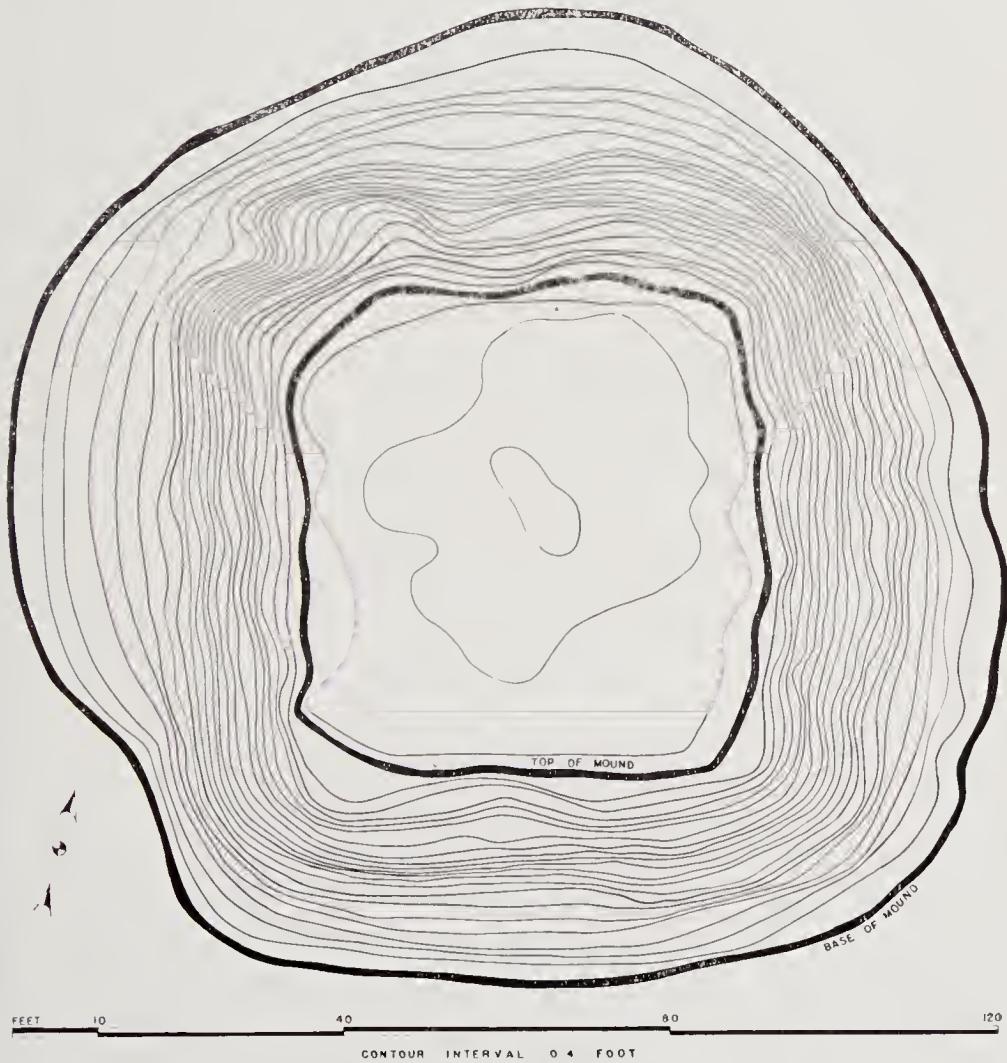


Figure 19. Surface contours of the domiciliary mound.

Although it had been under cultivation for five years the mound had suffered little erosion and its shape was well preserved. Two pits and 8 auger holes had been put down in the top, probably the work of treasure-seekers. The trench put down in the center of the mound by Cyrus Thomas in 1890 had been used for a mule burial.



Figure 20. The domiciliary mound as seen from the west. *Field photograph, April 16, 1935.*

#### Excavation Method

After the mound was cleared of brush and grass it was staked off in 5-foot squares numbered with reference to a north-south and an east-west axis.

The excavation was started by putting down an east-west trench 100 feet long and 5 feet wide 20 feet south of and parallel to the south side of the mound. The trench was dug to a depth of 4 feet in order to insure good drainage during excavation and to reveal pits or features precedent to the mound.

Excavation was continued by cutting the north wall of this east-west trench vertically toward the mound. Tentative observation profiles were cut at every foot, and at every 5-foot line profiles were charted and photographed. This technique was employed up to the 45-foot line, which was approximately on the south edge of the mound summit. A number of construction stages and occupational levels within the mound were then apparent. From that point on, a combination of horizontal "peeling" and vertical cutting was used in order to uncover each level separately.



Figure 21. General view of site operations. Looking northward. *Field photograph, October 1, 1939.*

When the northeast corner of the mound was reached a control block was retained. A clean vertical wall was kept on this block during the rest of the excavation and its stratification was checked with that showing in the 45-foot profile.

#### Structure of the Domiciliary Mound

The old humus layer (sandy loam) upon which the mound was built was of an average thickness of 0.7 foot and showed no evidence of having been prepared. Underlying the humus was red clay subsoil that extended down 2.5 feet to hardpan.

Construction phases were represented by the primary mound and five subsequent additions. These six construction stages will be described in the order in which they were built.

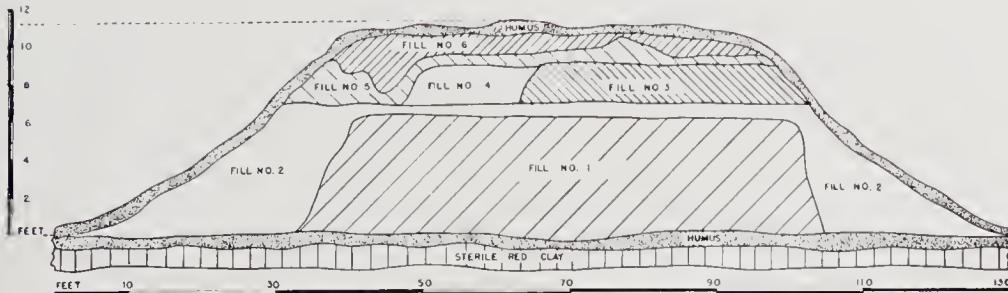


Figure 22. Profile through east-west axis of domiciliary mound. Vertical scale exaggerated.

**Fill No. 1.** Fill No. 1, or the primary mound, was a truncated pyramid with a rhomboidal top and base. Its top was 6.2 feet above the old humus layer.

The level top measured approximately 67 feet along its north-south axis and 70 feet east-west. The base measured approximately 75 feet north-south and 85 feet east-west. The sides had an inclination of about  $48^{\circ}$ .

A stepped ramp extended from the old humus layer up to the top of *Fill No. 1* at its southeast corner.



Figure 23. Uncovering the stepped ramp, a part of *Fill No. 1* of the domiciliary mound. Red clay of *Fill No. 2* breaking away from sand-covered steps. *Field photograph, April 24, 1940.*

The ramp had a  $25^{\circ}$  inclination and measured 13 feet from bottom to top, averaging 11 feet in width. Eight steps had been cut into the ramp in such a manner as to leave an uncut portion of the ramp slope at either end of each step. The first step was 1.3 feet above the old humus layer and the height of the other seven steps varied from 0.5 to 0.9 foot, their depth averaging 1.7 feet.

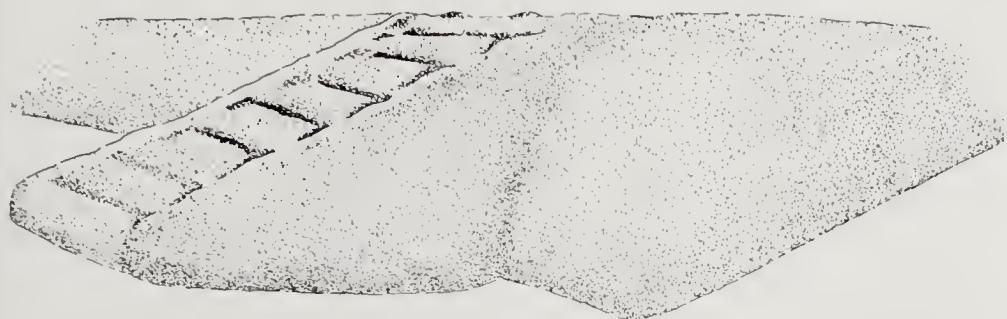


Figure 24. The stepped ramp at the southeast corner of *Fill No. 1* of the domiciliary mound.

The steps had been covered with a thin layer of sand. There was no evidence of logs such as are frequently found to cover steps of this sort.



Figure 25. Southeast corner of *Fill No. 1* of the domiciliary mound, showing stepped ramp. Top step of ramp still covered by *Fill No. 2*. Looking northward. *Field photograph, May 31, 1940.*

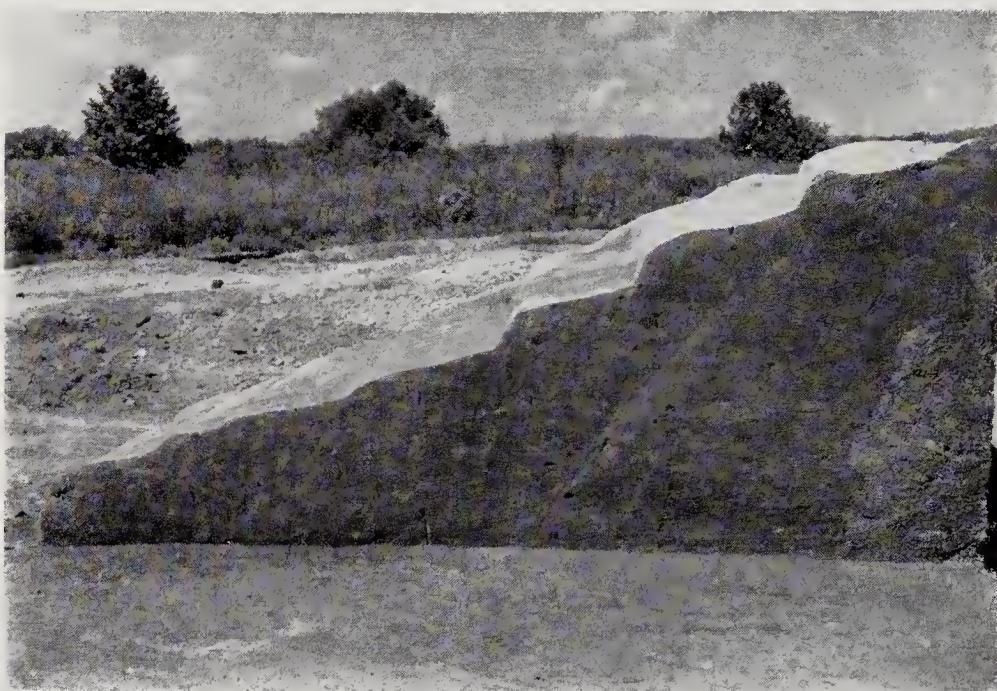


Figure 26. North-south cross section of the ramp which was a part of *Fill No. 1* of the domiciliary mound. Bar of light-gray clay, which was in the south face of the fill, showing in lower right-hand corner. *Field photograph, July 22, 1940.*

*Fill No. 1* was made up of distinct loads of clay and loam. Loads of yellow, red, and brown clay blended with those of brown to black loam, giving a color of dark gray. The south face of the fill showed a long, irregular bar of light-gray clay heavily peppered with manganese concretions. This mass of clay was about 5 feet wide at the base, 2 to 3 feet wide at the top, and extended from the old humus layer up to within one foot of the primary mound top.

**Fill No. 2.** The second construction phase was represented by a fill entirely covering the primary mound. In general, this second fill conformed to the shape of the primary mound, but its side slopes were less steep than those of the primary mound. Its sides constituted the lower two-thirds of the final mound.

The top of *Fill No. 2* measured 67.5 feet north-south and 75 feet east-west. It was approximately the same size as the top of *Fill No. 1*. The base of *Fill No. 2* measured 115 x 115 feet, being much larger than that of *Fill No. 1*.

Construction of *Fill No. 2* had added 0.7 foot to the height of *Fill No. 1*, giving the combined fills a height of 6.9 feet above the old humus layer.

*Fill No. 2* was made up of the red clay found as subsoil in the surrounding area.

**Fill No. 3.** The third fill was a small square mound from which a rectangular extension ran northward.



Figure 27. *Fill No. 3* of the domiciliary mound. A small, square mound, with a rectangular extension, superimposed on the southeast corner of *Fill No. 2*.

Looking southeast. *Field photograph, November 22, 1939.*

The square mound and its extension had been superimposed on the southeast corner of *Fill No. 2*, and the east side of the square mound formed a part of the east side of the final mound.

The top of the fill, exclusive of the rectangular extension, was 32.5 feet square. The base measured 36.5 feet north-south and 38.5 feet east-west. The top of the extension measured 17.58 feet north-south and 7 feet east-west, the base 18 feet north-south and 11 feet east-west. Side inclination of both the square portion and the extension was about 45°, except for the east side of the square portion, which conformed to the slope of the final mound and had an inclination of approximately 25°.



Figure 26. The domiciliary mound with *Fill Nos. 2 and 3* and the ramp of *Fill No. 4* exposed. Looking northward. *Field photograph, October 22, 1939.*

Construction of *Fill No. 3* had added 2 feet to the height of previous fills, making the top of the mound at this stage 8.4 feet above the old humus layer.

The fill was made up of mixed black loam and gray clay showing no definite loading.

**Fill No. 4.** A horizontal enlargement of *Fill No. 3*, north and west, represented the fourth construction stage.

The top of the fourth fill was even with the top of *Fill No. 3*, and *Fill Nos. 3 and 4* combined made up a frustum 60 feet on the north, 50 feet on the south, 63 feet on the east and west, and 2 feet high.

*Fill No. 4* was made up of mixed red and yellow clay showing no definite loading.

**Fill No. 5.** The fifth construction phase was represented by a capping which covered *Fill Nos. 3 and 4* and part of the surface of *Fill No. 2*. Its top, except for an oval area in the northeast section,



Figure 29. Part of *Fill No. 4*, a horizontal enlargement of *Fill No. 3* shown in Figure 25. Dark line (put down by excavator) indicates division of two fills. Dark area in right foreground represents trench put down by Cyrus Thomas in 1890. Looking southeast. *Field photograph, November 6, 1939.*

was undulating with rounding fingers extending toward the south. This uneven surface was evidently caused by erosion which took place before construction of the sixth and final fill.

The top measured 60 feet north-south and 55 feet east-west. The comparatively level oval area measured approximately 40 feet.

The fifth fill had raised the mound level approximately 1.5 feet, the level portion of its top being 10 feet above the old humus layer.

*Fill No. 5* was made up of yellow clay.

**Fill No. 6.** The sixth fill represented the final stage of mound construction. It was a capping which did not enlarge the mound horizontally, but completely covered the top of *Fill No. 5*.

Because of plowing and erosion it was impossible to determine just how much the sixth fill had raised the mound level. At the

time of excavation the top of this fill—i.e. the final surface of the mound—was 1.2 feet above the surface of *Fill No. 5* or 11.2 feet above the old humus layer.

*Fill No. 6* was made up of red clay.

#### Miscellaneous Cultural Material in Domiciliary Mound

The only artifacts found in the domiciliary mound were:

- 1 broken greenstone celt (*Fill No. 3*)
- 1 chipped greenstone celt (*Fill No. 6*)
- 1 broken greenstone celt (*Fill No. 6*)

These artifacts are described in detail in *Chapter V*.

#### Domiciliary Features of the Domiciliary Mound

Found in the domiciliary mound were the following features:

complete structure patterns	3
partial structure patterns	7
fire basins	7

There were in addition to the traceable structure patterns numerous complete and fragmentary wall trenches not contributing to any pattern, and numerous scattered post holes.

**General Description of Structure Patterns.** All of the structure remains found in mound, whether complete or fragmentary, were those of rectilinear structures which had, with two exceptions, been oriented with sides parallel to the sides of the mound. All of the structure patterns were of the entrenched-post-mold type, with nonconvergent corners. Post molds in all of the wall trenches were about 0.6 foot apart. Corner gaps left by the non-convergent wall trenches were about 1.5 feet wide. Many of the corners contained individually set post holes.

Throughout the mound the wall trenches were of approximately the same width and depth, and all of the post molds were of approximately the same diameter and depth. Corner post holes scattered throughout the fills varied very little. These average measurements were as follows:

wall trenches	
width	0.7 foot
depth	1.0 foot
post molds	
diameter	0.3 foot
depth	1.0 foot
corner post holes	
diameter	0.5 foot
depth	1.3 feet
scattered post holes	
diameter	0.5 to 0.8 foot
depth	1.2 to 1.8 feet

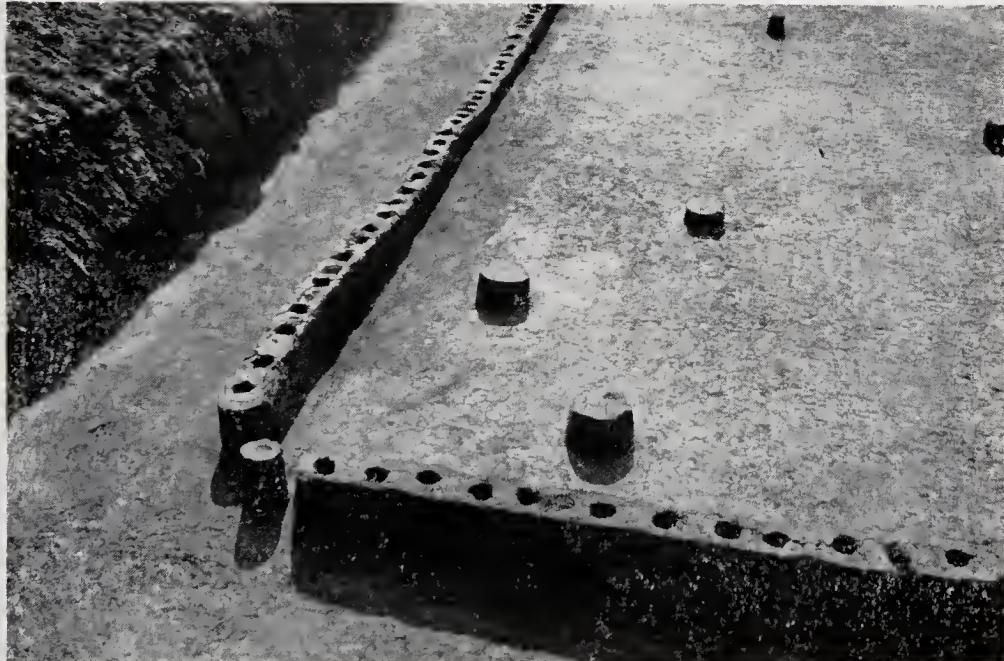


Figure 30. A typical structure-pattern corner showing nonconvergent wall trenches, a post hole in the corner gap, and scattered post holes in the interior of the pattern. Excavation technique is intended to differentiate aboriginal construction techniques represented by holes actually dug and molds left by the decay of posts in the tamped earth of a trench. The excavation reveals a reverse picture of the construction—dug *holes* and trenches are left in relief, and *molds*, formed by filled-in trenches, are hollowed out. *Field photograph, September 16, 1940.*

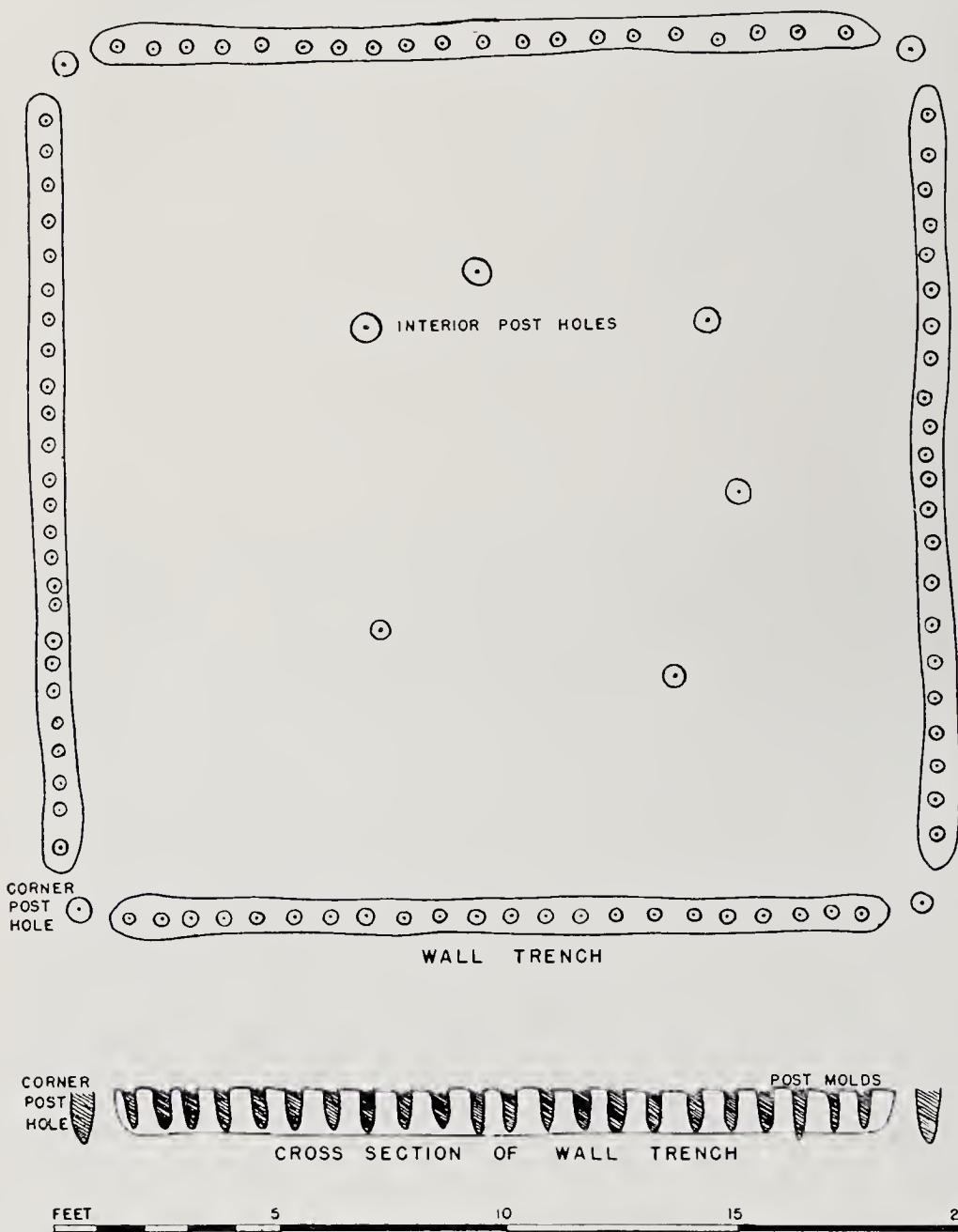


Figure 31. A structure pattern typical of those found at the Bessemer Site. Wall trenches are nonconvergent and corner gaps contain individual post holes which are deeper than the entrenched molds, as shown by the cross section. Scattered post holes within the pattern probably represent furniture or roof supports.



Figure 32. Baked-clay fire basin (ash and charcoal fill removed) typical of those found at the Bessemer site. Associated with *Structure Pattern No. 4* of the domiciliary mound. *Field photograph, April 2, 1940.*

**Structure Pattern Distribution.** *Fill No. 1*, or the primary mound, contained one complete structure pattern (*Structure Pattern No. 1*) with an associated fire basin, and one partial structure pattern (*Structure Pattern No. 2*) with an associated fire basin. It also contained two complete and three fragmentary wall trenches which did not contribute to any pattern, and a number of scattered post holes. Two of the fragmentary wall trenches were oriented northeast-southwest, being the only structure remains in the entire domiciliary mound not oriented parallel with the sides of the mound.

*Fill No. 2* contained two complete structure patterns (*Structure Pattern Nos. 3 and 4*) with four associated fire basins, and one partial structure pattern (*Structure Pattern No. 5*) with one associated fire basin.

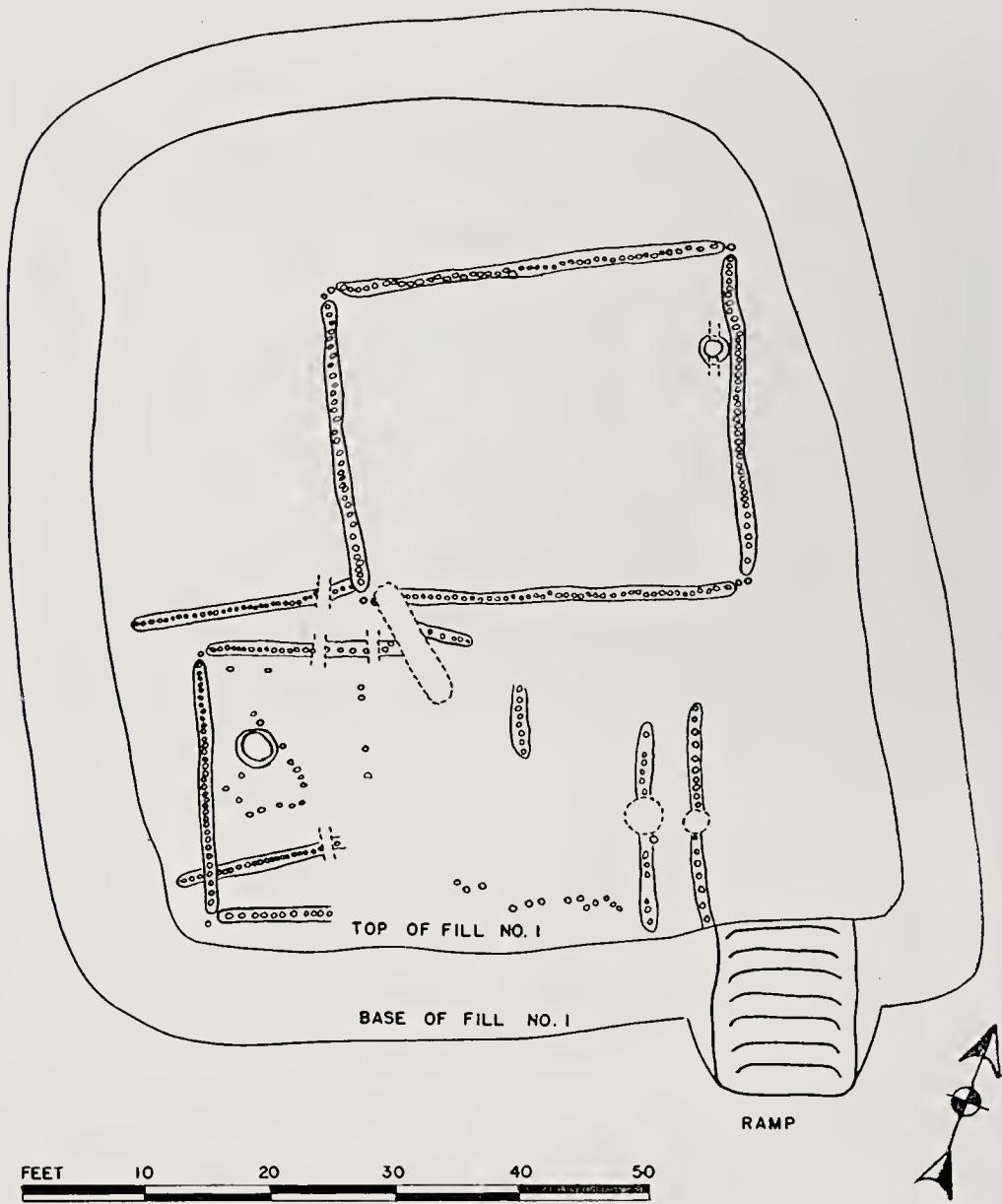


Figure 33. Structure patterns on *Fill No. 1* of the domiciliary mound.

It also contained 11 complete and 11 fragmentary wall trenches which did not contribute to any pattern, and a number of scattered post holes.

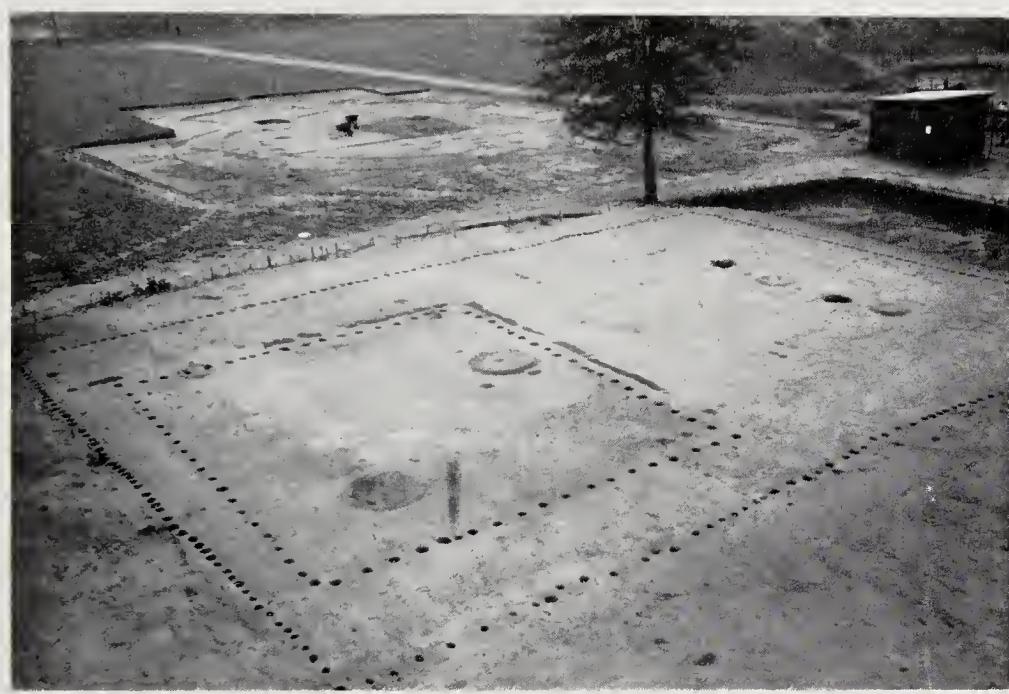


Figure 34. Two complete structure patterns and four associated fire basins on surface of *Fill No. 2* of the domiciliary mound. The fifth fire basin, at the extreme left, was associated with one of the structures on *Fill No. 1*. Excavated village area in background. Looking southeast. *Field photograph, April 8, 1940.*

*Fill Nos. 3 and 4*, which were on the same horizontal plane, contained two partial structure patterns (*Structure Patterns Nos. 6 and 7*).

*Fill No. 5* contained only one wall trench, which was in the north-central portion of the fill and measured 24 feet east-west.

#### *Structure Pattern No. 1*

*Structure Pattern No. 1* was on the northeast quarter of the primary mound and was the only complete structure pattern on *Fill No. 1*. It measured 33 feet east-west by 28 feet north-south. Part of the southwest corner of the pattern had been cut away by the trench put down by Cyrus Thomas in 1890, and other portions

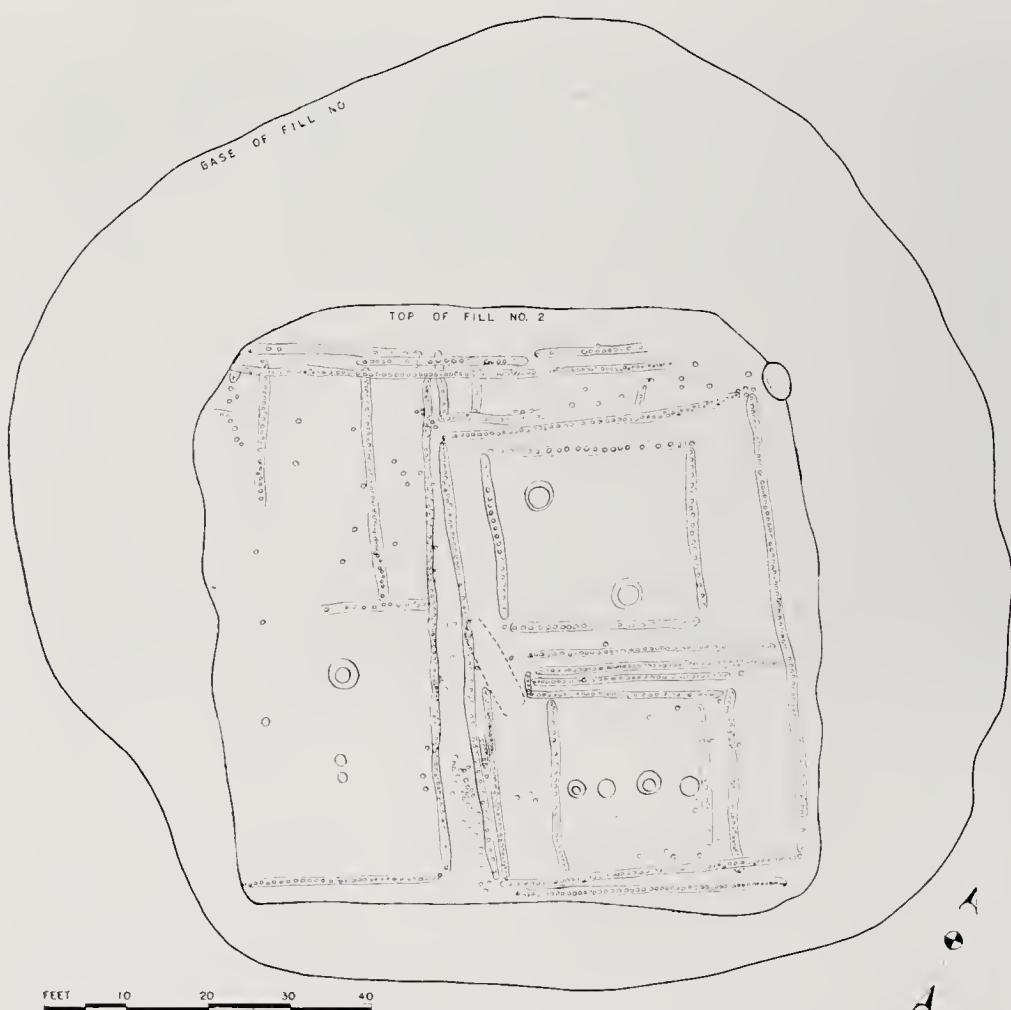


Figure 35. Complete and partial structure patterns on *Fill No. 2* of the domiciliary mound.

of the pattern had been obliterated by parts of 2 structures from an upper fill.

In the northwest corner gap left by the nonconvergent wall trenches were two post holes, and there were two post holes in the southeast corner gap. There was one post hole in the northeast corner gap, and one in the southwest corner gap.

Just within the east wall trench and near the northeast corner of the pattern was a baked-clay fire basin. It was circular, 2.0 feet



Figure 36. Part of *Fill No. 5* showing the one wall trench which it contained. This fill was just below the surface of the mound. Pit at right represents trench put down by Cyrus Thomas in 1890. Scattered auger holes put down by treasure-seekers. *Field photograph, October 13, 1939.*

in diameter, with a raised rim approximately 0.3 foot high. Intruded into the fire basin was a wall trench from an upper fill.

#### *Structure Pattern No. 2*

This was a partial structure pattern on the southwest quarter of the primary mound. It consisted of a north wall trench, a west wall trench and part of a south wall trench. The north wall trench measured 21.5 feet east-west. The west wall trench measured 21 feet north-south. The fragmentary south wall trench measured 9 feet east-west, extending eastward from the southwest corner. The east end of the north wall trench had been cut into by Cyrus Thomas in 1890.

In the northwest corner gap left by the nonconvergent wall trenches was one post hole, and there was one post hole in the

southwest corner gap. A number of scattered post holes were within the area defined by the three wall trenches.

Toward the northwest corner of the pattern was a baked-clay fire basin filled with ash and charcoal. It was circular, 3 feet in diameter, with a raised rim approximately 0.3 foot high.

#### *Structure Pattern No. 3*

*Structure Pattern No. 3* was in the east half of *Fill No. 2* and was the larger of two complete structure patterns on that fill. It measured 50 feet north-south and 40 feet east-west.

In the northeast corner gap left by the nonconvergent wall trenches were 4 post holes, and there was 1 post hole in the southeast corner gap.

Toward the south end of the structure pattern were two large post holes 8 feet apart. They were of equal size, 2.2 feet in diameter and 3 feet in depth. Just west of each of these post holes was a circular, baked-clay fire basin. The fire basin just west of the west post hole was 2.5 feet in diameter with a raised rim 0.4 foot high. The other fire basin, midway between the two large post holes, was 3 feet in diameter with a raised rim 0.6 foot high.

#### *Structure Pattern No. 4*

*Structure Pattern No. 4*, the smaller of the two complete structure patterns on *Fill No. 2*, was within the north half of the larger pattern. It was approximately square, measuring 25 feet east-west and 23 feet north-south. Each of its corner gaps, except the southeast, contained a single post hole.

Toward the northwest corner of this structure pattern was a circular, baked-clay fire basin, and toward the southwest corner a similar fire basin. These fire basins may have been associated with *Structure Pattern No. 2*. The basins were about 3.6 feet in diameter with raised rims about 0.5 foot high. (*See Figure 32.*)

#### *Structure Pattern No. 5*

*Structure Pattern No. 5* was a partial structure on the west half of *Fill No. 2*. It consisted of a complete north wall trench, part of a south wall trench, a complete east wall trench, and a

small fragment of a west wall trench. The western end of the south wall trench and most of the west wall trench had evidently been eroded away with the western edge of *Fill No. 2*. The complete wall trenches measured 64 feet north-south and 21 feet east-west.

In the southeast corner gap left by the nonconvergent wall trenches was one post hole.

In the south half of the structure pattern were three large post holes with no special arrangement. All of these post holes had a diameter of about 1.3 feet and a depth of 1.0 foot.

Toward the center of the structure was a circular, baked-clay fire basin having a diameter of 4.0 feet and a raised rim 0.5 foot high.

#### *Structure Pattern No. 6*

*Structure Pattern No. 6* was a partial structure pattern in the southeast corner of *Fill No. 3*. It consisted of a north wall trench and a south wall trench, both of which were 20 feet long. The south and east wall trenches had evidently been eroded away with the east and south edges of *Fill No. 3*. (*See Figure 27.*)

#### *Structure Pattern No. 7*

*Structure Pattern No. 7* was a partial structure pattern at the eastern edge of *Fill No. 2*. It consisted of an east wall trench and a south wall trench, both of which extended into *Fill No. 4*. The east wall trench measured 37 feet north-south, the south wall trench 17.5 feet east-west.

At right angles to the midway point of the east wall trench another wall trench ran westward a distance of 3 feet where it terminated in the trench put down during the Cyrus Thomas investigation of 1890. (*See Figures 27 and 29.*)

### *VILLAGE AREAS UNDER AND AROUND THE DOMICILIARY MOUND*

There were two village areas near the domiciliary mound. One was immediately northwest of the mound, its southern extremity extending under the western side of the mound. The other

area started 35 feet east of the mound. General dimensions of the northwest village area were 200 feet north-south by 125 feet east-west. General dimensions of the east village area were 75 feet north-south by 100 feet east-west.

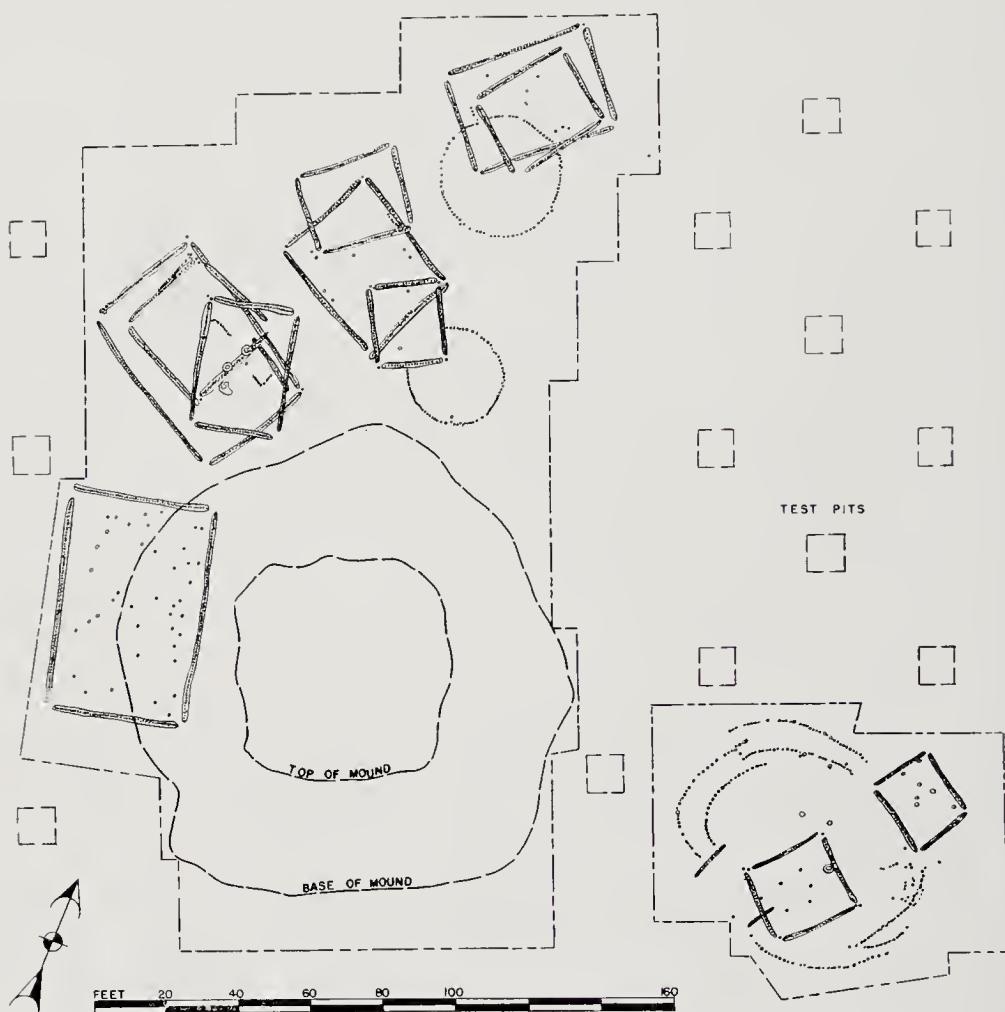


Figure 37. Structure patterns under and around the domiciliary mound.

The northwest village area had been covered with erosional debris from the mound. This erosional debris had protected the area from being damaged by plowing. Profile of the northwest village area showed a plowed zone 0.7 foot thick, unplowed erosional debris 0.2 to 0.7 foot thick, and an old humus layer 0.3 foot thick. The east village area, lying 35 feet from the mound, contained no ero-

sional debris and had been slightly damaged by plowing. Profile of the east village area showed a plowed zone 0.5 foot thick and an old humus layer 0.3 foot thick.

Found in the village areas under and around the domiciliary mound were the following domiciliary features:

complete structure patterns	13
stockade or enclosure pattern	1
fire basins (associated with structure patterns)	3
pits (associated with structure patterns)	4

Artifacts found in the humus layer under and around the domiciliary mound were as follows:

blade or knife, flint	1
celts, broken, greenstone	5
end-scraper, jasper	1
projectile point, side-notched	1
projectile points, stemmed	3
projectile points, triangular	4

Detailed descriptions of these artifacts are given in *Chapter V*.

On the humus layer under the south slope of the mound was a stone heap which, when first uncovered, was thought to be a stone grave. Upon removal of the stones, however, no traces of skeletal material could be found. The stone heap was 1.2 feet high, 8.4 feet long north-south, and 2.5 feet wide east-west. It was made up of irregular pieces of limestone varying in size from small fragments to slabs 1.5 feet in diameter. The limestone was similar to that making up the stone pavement of the ceremonial mound.

#### Domiciliary Features, Village Areas under and around the Domiciliary Mound

**General Description of Structure Patterns.** Of the 17 structure patterns found under and around the domiciliary mound 14 were rectilinear and 3 were circular. All of the rectilinear patterns had

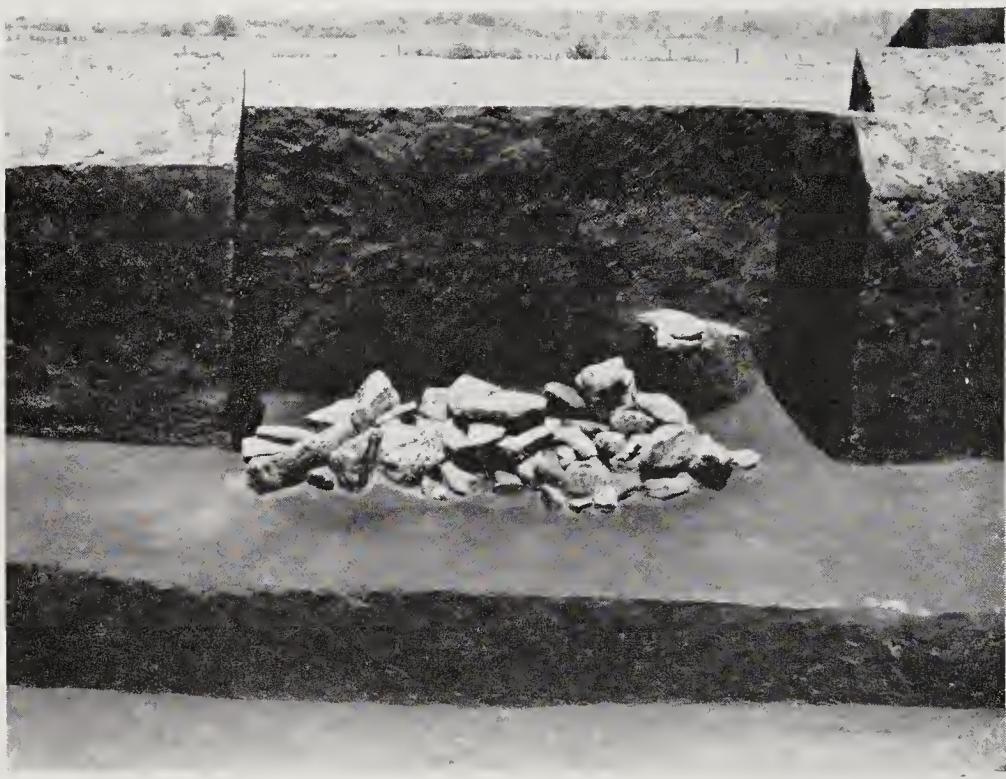


Figure 38. Stone heap, on humus layer, under south slope of domiciliary mound.  
*Field photograph, June 21, 1940.*

nonconvergent corners and were made up of entrenched post molds. The circular patterns were made up of individually set post holes. Corner gaps left by the wall trenches of the rectangular patterns averaged 0.5 foot in width and frequently contained individually set post holes. Post molds in all of the wall trenches were about 0.5 foot apart.

All of the wall trenches were of approximately the same width and depth, and all of the post molds were of approximately the same diameter and depth. With few exceptions the post holes, also, were of uniform size. These average measurements were as follows:

wall trenches	
width	0.8 foot
depth	1.1 feet

post molds		
diameter	.....	0.4 foot
depth	.....	1.0 foot
post holes		
diameter	.....	0.5 foot
depth	.....	1.5 feet

**Structure Pattern Distribution.** In the northwest village area were 9 rectilinear structure patterns (*Structure Pattern Nos. 1-9*) and 2 circular structure patterns (*Structure Pattern Nos. 10-11*). In the east village area were 2 rectilinear structure patterns (*Structure Pattern Nos. 13-14*) and 1 curvilinear stockade or enclosure pattern (*Structure Pattern No. 12*).



Figure 39. Village area northwest of the domiciliary mound. East village area in right background. Looking southeast. *Field photograph. May 16, 1940.*

#### *Structure Pattern No. 1*

*Structure Pattern No. 1* was the largest structure pattern found at the Bessemer Site and represented the only structure that definitely existed prior to the building of the domiciliary mound. It was rectangular and lay in the southwest extremity of the northwest village area, its eastern edge lying under the western

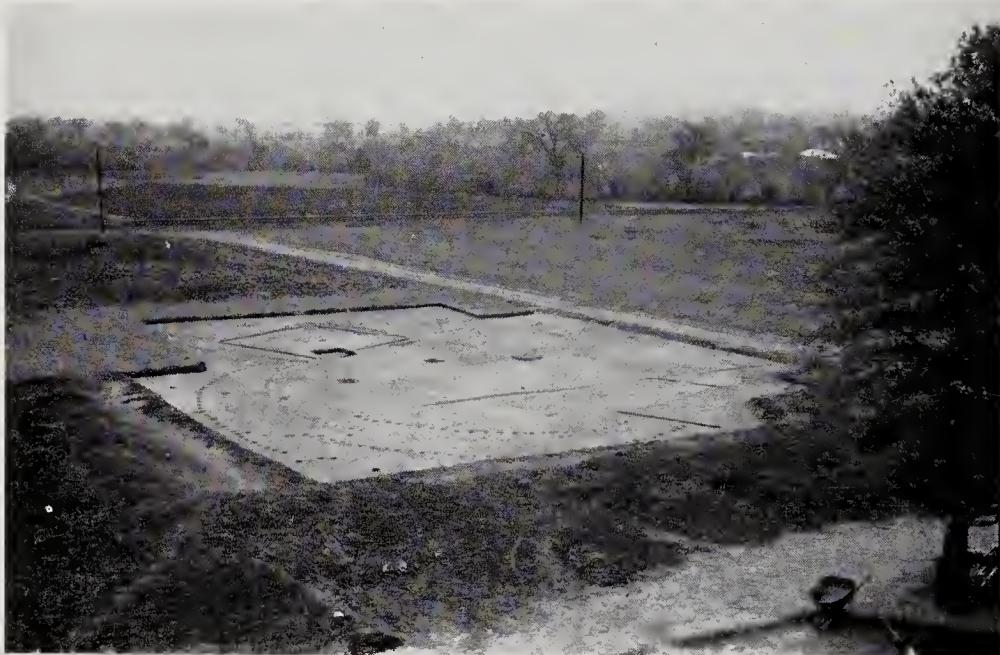


Figure 40. Village area east of the domiciliary mound. Looking southeast.  
*Field photograph, April 25, 1940.*

slope of the mound (*Fill No. 2*). It measured 61 feet north-south and 39 feet east-west.

The southeast and southwest corner gaps each contained a post hole. Within the pattern and with no special arrangement were 46 post holes probably indicating furniture supports and roof supports.

#### *Structure Pattern No. 2*

*Structure Pattern No. 2* was one of a concentration of three rectilinear patterns just northwest of the domiciliary mound. It represented the latest of the three structures represented in the concentration, since its wall trenches intruded into the wall trenches of the other two patterns (*Structure Pattern Nos. 3 and 4*). It measured 35.5 feet north-south and 25.5 feet east-west.

In the northwest corner gap were two post holes.

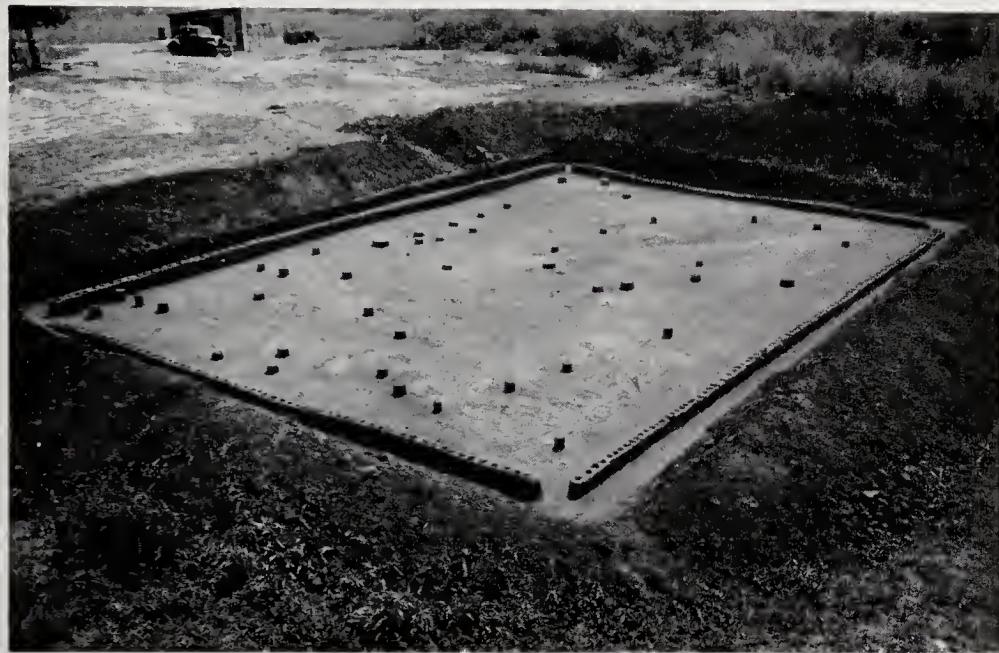


Figure 41. *Structure Pattern No. 1*, northwest village area. Half of this pattern was under the western edge of the domiciliary mound. Looking southeast.  
*Field photograph, September 14, 1940.*

Within the west-central portion of the pattern was a circular, baked-clay fire basin containing a heavy fill of ash and charcoal. It had a diameter of 4.2 feet, a raised rim 0.3 foot high, and an interior depth of 0.6 foot. Three feet northeast of this fire basin was a smaller fire basin with a diameter of 3.2 feet, a raised rim 0.3 foot high, and an interior depth of 0.5 foot. The east half of this smaller fire basin had been cut away by a pit having a depth of 3.0 feet, and a diameter of 2.0 feet. From the north side of the pit a "step" extended down into the pit a distance of 1.0 foot. This "step" gave the top of the pit a maximum diameter of 3.2 feet. Another pit similar to this one in shape and size was toward the southwest corner of the structure pattern. In the bottom of this pit were several potsherds and fragments of animal bones.

#### *Structure Pattern No. 3*

*Structure Pattern No. 3* was intermediate in the concentration of three rectilinear patterns just northwest of the domiciliary

mound. Its wall trenches had been cut into by a later pattern (*Structure Pattern No. 2*, just described) and they, in turn, cut into an earlier pattern (*Structure Pattern No. 4*). The pattern was approximately square, measuring 29.5 feet northeast-southwest and 28.5 feet northwest-southwest.

In the south corner gap was one post hole. Just outside the north half of the northwest wall trench was a line of 13 post holes. These, and several post holes at the north corner of the pattern, had probably contained extra wall supports, or roof supports.

This pattern outlined a prepared floor, of red clay, averaging 0.1 foot thick.



Figure 42. *Structure Pattern Nos. 2, 3 and 4*, village area northwest of domiciliary mound. Looking southeast. *Field photograph, May 10, 1940.*

#### *Structure Pattern No. 4*

*Structure Pattern No. 4* was the oldest in the concentration of three rectilinear patterns just northwest of the domiciliary mound. Its wall trenches had been cut into by the other two patterns (*Structure Pattern Nos. 2 and 3*). It measured 54 feet northwest and 35 feet southeast. Only one other pattern in the entire village area (*Structure Pattern No. 1*) was larger.

Nonconvergent wall trenches left corner gaps, and in each of these corner gaps, except the south one, there was a single post hole.

In the east corner of the pattern,  $1\frac{1}{2}$  feet from and parallel to the northeast wall trench, was a single wall trench 17 feet long. It contained post molds similar to those in the pattern wall trenches. Within the east half of the pattern was an L-shaped line of post holes which ran 21 feet southeast and 3.5 feet northeast. This line was parallel to and 9 feet from the northeast and southeast sides of the pattern. It may represent a part of another structure or it may represent a partition within *Structure Pattern No. 4*.

In one of the post molds of the southwest wall trench were several pieces of charred wood and cane.

#### *Structure Pattern No. 5*

*Structure Pattern No. 5* was one of a concentration of 3 rectangular patterns and 1 circular pattern just north of the domiciliary mound. It was rectangular and its wall trenches intruded into the northern end of one of the other rectangular patterns in the concentration (*Structure Pattern No. 6*). It measured 28.5 feet northeast-southwest and 23.5 feet northwest-southeast.

Superimposed on the southwest wall trench of this structure, and extending over the northwest wall trench of another rectangular pattern, *Structure Pattern No. 6*, was a block of red clay. This block was roughly oval in shape. It was 1.2 feet high and measured 10 feet northeast-southwest, 5 feet northwest-southeast. It resembled an eroded clay seat. It could not have been within a structure, however, since it lay over the wall trenches of the only two structures in its vicinity.

#### *Structure Pattern No. 6*

*Structure Pattern No. 6* was the oldest of the 3 rectangular patterns in the concentration of 3 rectangular patterns and 1 circular pattern just north of the domiciliary mound. It measured 39 feet northwest-southeast and 30 feet northeast-southwest.

Post molds ran in a double line for a distance of 9 feet in the central portion of the northwest wall trench. In the north corner

gap was an individually set post hole. Within the pattern were three pairs of post holes, one pair near the northeast wall trench, one pair near the northwest wall trench, and one pair near the southwest wall trench. Parallel to and just within the northeast wall trench was a line of 6 post holes. Just east of the center of the pattern was a post hole larger than the others, measuring 1.1 feet in diameter and 1.5 feet in depth.

#### *Structure Pattern No. 7*

*Structure Pattern No. 7* was the third rectangular pattern in the concentration of 3 rectangular patterns and 1 circular pattern just north of the domiciliary mound. Its wall trenches intruded into the southern end of *Structure Pattern No. 6*. It measured 23.5 feet northwest-southeast and 20 feet northeast-southwest.

In each of the 4 corner gaps was an individually set post hole. Within the pattern were 2 post holes, one near the northeast corner and one near the southwest corner.

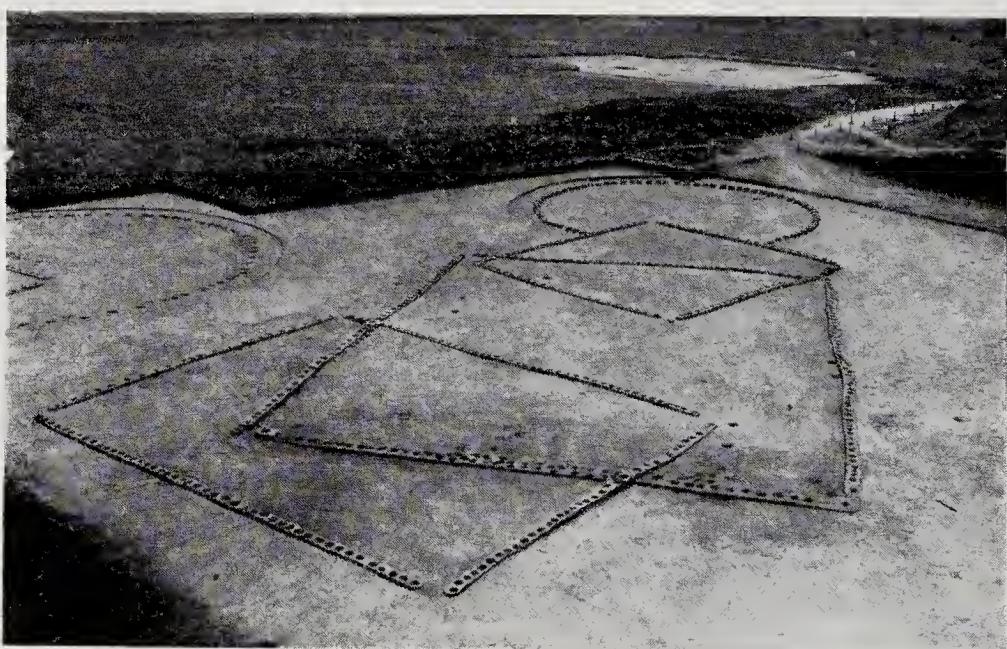


Figure 43. Structure patterns in village area northwest of the domiciliary mound. The concentration of four patterns showing up in the center of the picture includes *Structure Pattern Nos. 5, 6, 7 and 8*. Looking southeast. *Field Photograph, May 16, 1940.*

*Structure Pattern No. 8*

*Structure Pattern No. 8* was a circular pattern and occupied the southernmost position in the concentration of 4 patterns just north of the domiciliary mound. It was made up of 71 individually set post holes outlining 4/5 of a circle 26.5 feet in diameter. The remaining 1/5 of the circle was an opening on the west side of the pattern, and into this opening the east corner of *Structure Pattern No. 7* extended.

Two feet inside the southern periphery of this circular structure was a single post hole.



Figure 44. *Structure Pattern No. 8*, village area northwest of domiciliary mound.  
Looking northeast. *Field photograph, May 16, 1940.*

*Structure Pattern No. 9*

*Structure Pattern No. 9* was the circular pattern in a concentration of 2 rectangular patterns and 1 circular pattern at the northern extremity of the village area northwest of the domiciliary mound. It was the latest of the three patterns with which it was associated and intruded into parts of the rectangular patterns (*Structure Pattern Nos. 10 and 11*). It was made up of 81 individually set post holes outlining a perfect circle 33.5 feet in diameter.

*Structure Pattern No. 10*

*Structure Pattern No. 10* was the later of the 2 rectangular patterns in the concentration of 2 rectangular patterns and 1 circular pattern at the northern extremity of the village area northwest of the domiciliary mound. It measured 29 feet northeast-southwest and 24.5 feet northwest-southeast.

Within the northeast half of *Structure Pattern No. 10* were 7 post holes which may have served as furniture or roof supports for this pattern or for the older *Structure Pattern No. 11*.

*Structure Pattern No. 11*

*Structure Pattern No. 11* was the earliest pattern in the concentration of 3 patterns at the northern extremity of the village area northwest of the domiciliary mound. It was rectangular and measured 42 feet northeast-southwest and 29.5 feet northwest-southeast.

In the north corner gap was a single post hole. Within the western portion of the pattern were three post holes of the usual size, and 1 larger post hole 1.0 foot in diameter.

*Structure Pattern No. 12*

*Structure Pattern No. 12* was the double curvilinear stockade or enclosing fence pattern in the village area east of the domiciliary mound. It was oval in shape with a maximum diameter of 76 feet.

In its northeast and southwest sides were gaps approximately 27 and 18 feet wide, respectively. Within the northeast gap a wall trench of a rectangular structure pattern (*Structure Pattern No. 13*) protruded. The latter pattern may represent a structure which was contemporaneous with the enclosure. At either end of the southwest gap and at right angles to the pattern outline was a single wall trench. Each of these wall trenches was approximately 10 feet long and contained post molds. That half of the enclosure pattern which was north of the gaps was made up of a double line

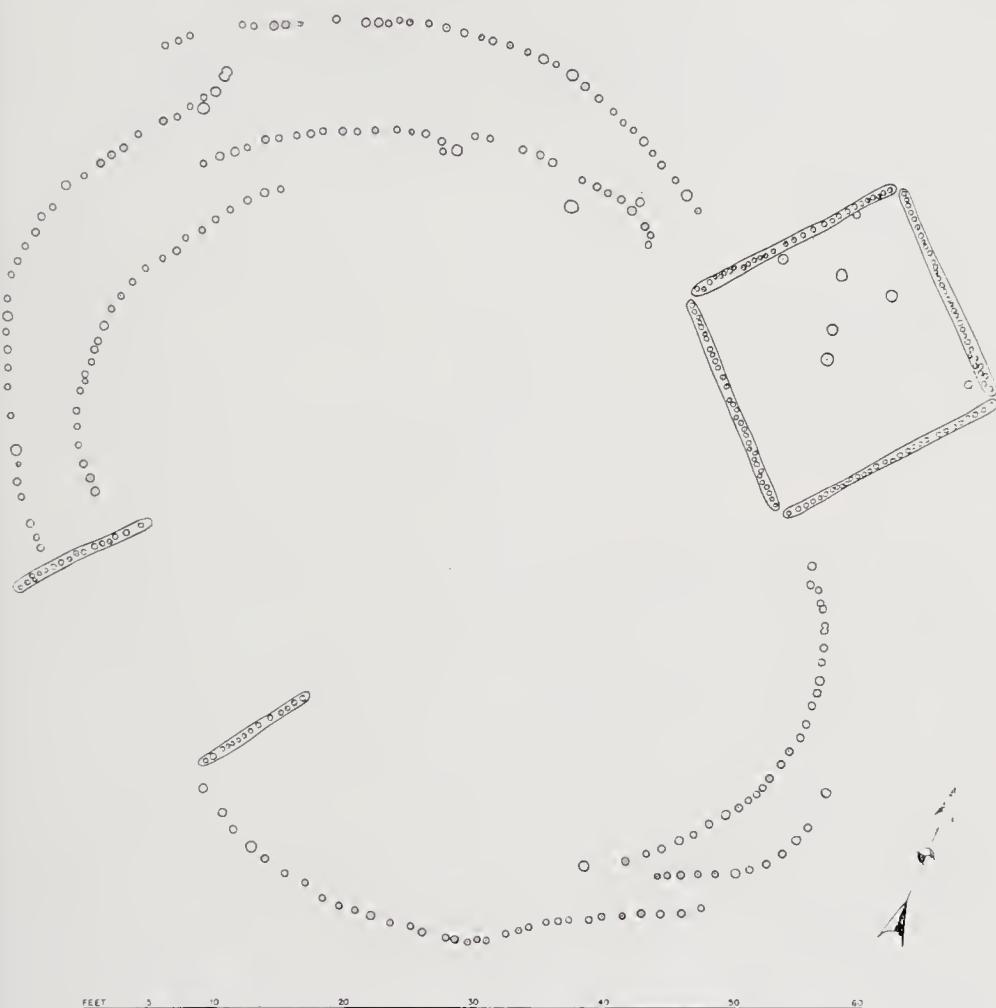


Figure 45. Stockade or enclosing fence pattern (*Structure Pattern No. 12*), village area east of domiciliary mound.

of post holes. This double line was broken and "overlapped" at the midway point of the semicircle. That part of the pattern southeast of the gaps was made up of a single line of post holes. This single line was also broken and "overlapped" at its midway point, leaving a gap into which a curved line of 12 post holes extended.

The post holes of the enclosure pattern averaged 0.6 foot in diameter and 1.3 feet in depth. Within the north half of the pattern were two barren pits approximately 2.3 feet in diameter.

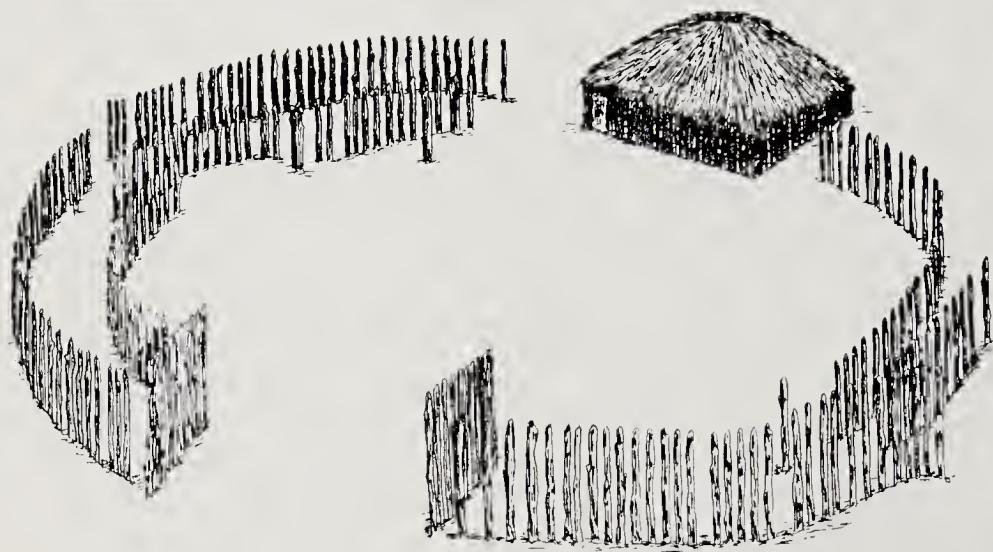


Figure 46. Reconstruction of curvilinear enclosure and rectilinear structure, based on *Structure Pattern Nos. 12 and 13* located in the village area east of the domiciliary mound.

#### *Structure Pattern No. 13*

*Structure Pattern No. 13* was one of the rectilinear patterns in the concentration of 2 rectilinear patterns and a double curvilinear stockade or enclosing fence pattern in the village area east of the domiciliary mound. Its west side filled the northwest gap of the enclosure pattern. It was almost square, measuring 17.5 feet northwest-southeast and 18 feet northeast-southwest.

Within the pattern were 7 post holes, 2 near the northeast wall trench, 1 near the northwest wall trench, and 4 larger ones toward the center of the structure.

#### *Structure Pattern No. 14*

*Structure Pattern No. 14* was a rectangular pattern within the southern portion of the double curvilinear stockade or enclosing fence pattern. It represented a later structure than the enclosure pattern. This was evidenced by its southeast wall which intruded through part of the enclosure pattern. The pattern measured 24.5 feet northeast-southwest and 19 feet northwest-southeast.

The south and west corner gaps each contained 2 post holes. The north and east corner gaps each contained 1 post hole. Within the pattern were 5 larger post holes, 1.1 feet in diameter, which probably represented roof supports.

Just within the northeast wall trench, at its midway point, was a circular, baked-clay fire basin filled with ash and charcoal. The basin measured 4.0 feet in diameter and 0.2 foot in depth. It had a raised rim 0.4 foot high. The top of the rim had been cut away by plowing.

This structure pattern had a prepared floor of red clay, 0.15 foot thick.

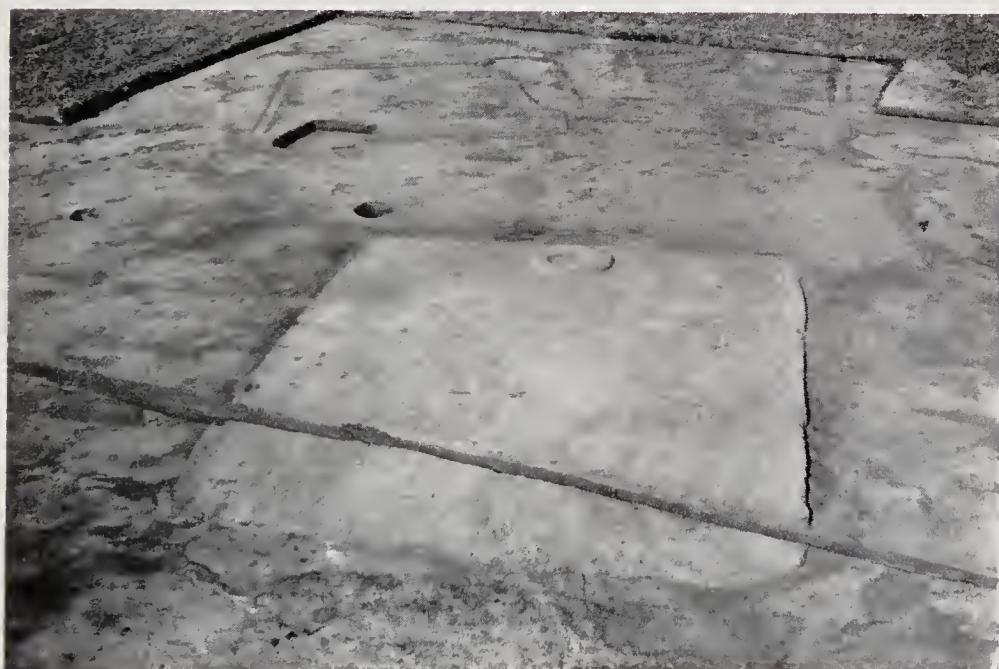


Figure 47. Red clay floor and fire basin of rectilinear structure pattern (*Structure Pattern No. 14*) in the village area east of domiciliary mound. Trench running through floor is drainage ditch put down during excavation. *Structure Pattern Nos. 12 and 13* in background. Looking east. *Field photograph, April 1, 1940.*



## CHAPTER IV

### THE BURIAL MOUND

The burial mound was oval-conoidal in shape, and 7½ feet high. Its base measured 90 x 61 feet, its major axis running northeast-southwest. The highest point of the mound was near its exact center and the sides sloped convexly to the base. The north side was steeper than the other three sides, its slope conforming to and running continuously with the steep slope of the bank of Valley Creek.



Figure 48. The burial mound. Valley Creek is just behind it. Looking northeast.  
*Field photograph, April 16, 1935.*

When the mound was cleared of trees and brush in 1935 its surface contours were well defined. It was put under cultivation at that time, however, and when excavations were resumed in 1939 about 1 foot of soil had eroded from its top.

During the 1935 excavations a trench 10 feet wide was cut to below the mound base through the long axis of the mound. The

field records of material recovered at that time have been incorporated with those of the 1939-40 excavations.

### Excavation Method

The mound was staked off in 5-foot squares numbered with reference to a north-south and an east-west axis. An initial trench, put down just south of the mound, was carried to a depth of three feet in order to reveal any features below the mound base. The north wall of this trench was then cut vertically toward the mound. This vertical slicing, combined with horizontal slicing where features appeared, was continued throughout the excavation. Profiles were charted and photographed at 5-foot intervals.

### Structure of the Burial Mound

The mound was built on an old humus layer approximately 0.7 foot thick. Red clay subsoil underlay the humus and extended down 2.5 feet to hardpan.

Two stages of construction were represented in the mound structure. The earlier phase was represented by a relatively small primary mound (*Fill No. 1*) which had been completely covered by a fill (*Fill No. 2*) making up the final contour of the mound.

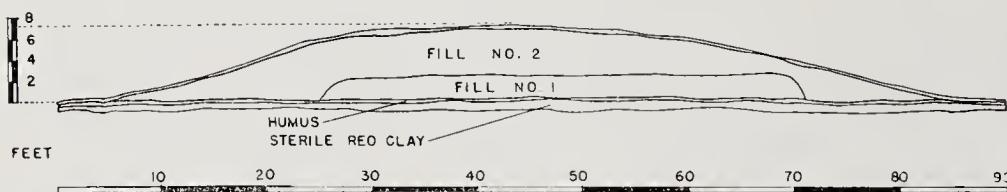


Figure 49. Profile through east-west axis of burial mound.

**Fill No. 1.** The primary mound was intercardinally oriented and was almost square. The top was generally flat and the sides sloped quite steeply to the base. A more gradual slope had been cut into the west corner. (See Figure 50). This indentation may have been used as an approach to the top of the primary mound.

The top of the primary mound was very hard-packed, but contained no domiciliary features. It measured 50 feet northeast-southwest by 42 feet northwest-southeast, and was raised about 3 feet above the old humus.

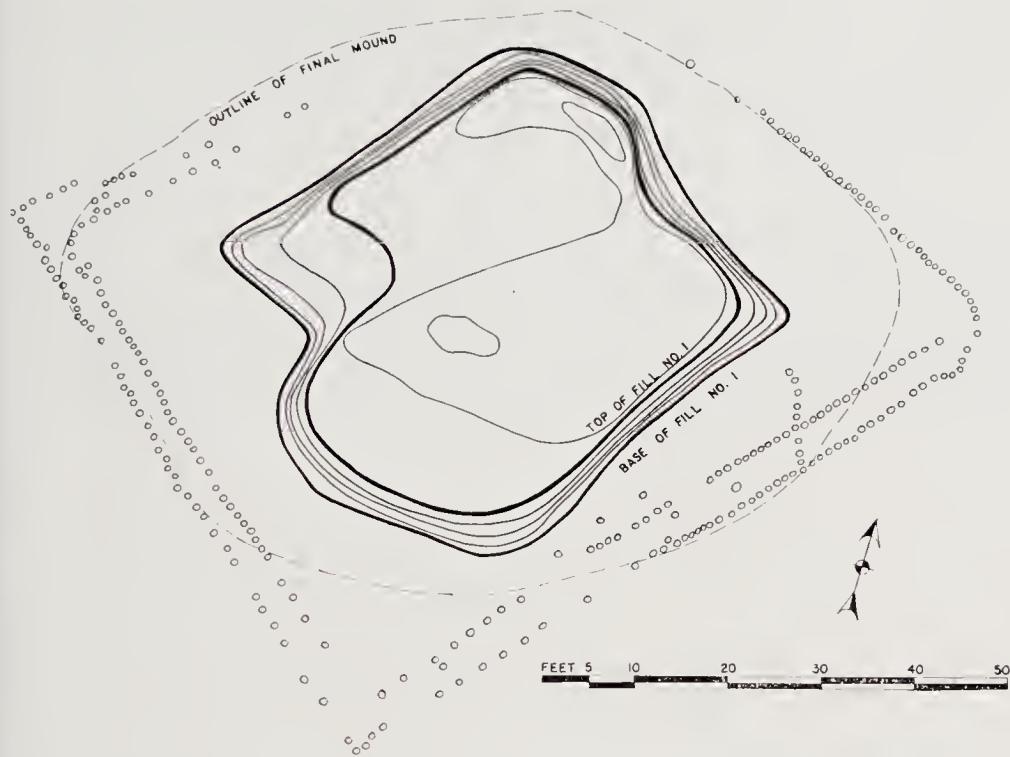


Figure 50. Surface contours of the primary mound, showing position of primary mound in relation to stockade pattern.

*Fill No. 1* was made up of dark-gray loam containing a few loads of clay.

In the old humus layer, and definitely following the outline of *Fill No. 1*, were post holes of a small stockade or enclosing fence which had been set 10 to 12 feet out from the sides of *Fill No. 1*.

The stockade pattern terminated at that edge of the fill which was directly on the edge of the creek bank. Post holes may never have existed here, or they may have been destroyed by erosion. At least part of the stockade had been double-walled (*See Figure 50*). The walls, where double, had been about 3 feet apart. The post holes were spaced about 1.1 feet apart, and averaged 0.6 foot in diameter, 1.2 feet in depth.

**Fill No. 2.** This fill, representing the second and final stage in



Figure 51. East corner of double stockade pattern around the primary fill of the burial mound. *Field photograph, October 12, 1940.*

the construction of the burial mound, completely covered *Fill No. 1* (the primary mound) and covered all of the stockade pattern except the corners. The addition of *Fill No. 2* had raised the height of the mound 4 feet, giving it a maximum height of  $7\frac{1}{2}$  feet.

*Fill No. 2* was made up of clay identical to the subsoil of the region. Several definite loads were evident.

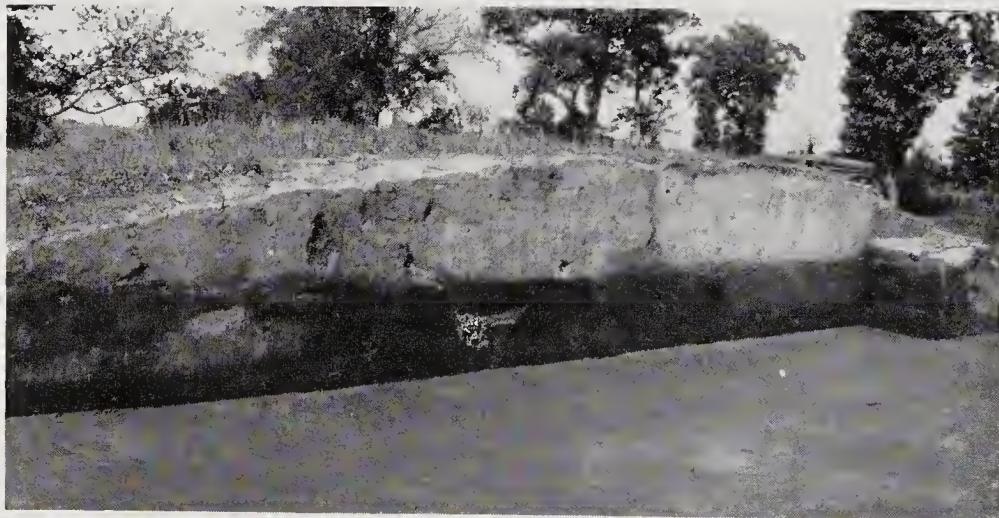


Figure 52. Profile through east-west axis of burial mound, showing small primary mound (of dark loam) and capping of red clay subsoil making up the final contour of the mound. *Field photograph, September 6, 1940.*

### Burials and Associated Cultural Material in Burial Mound

Twenty-two burials were recovered during excavation of the burial mound. Their relation to the mound structure may be summarized as follows:

	Burial Nos.
Inclusive—	
in <i>Fill No. 2</i>	4-5
Intrusive—	
from surface of <i>Fill No. 1</i>	1-3
from surface of <i>Fill No. 2</i>	6-19
Just outside Mound—	
pits in humus layer	20-22

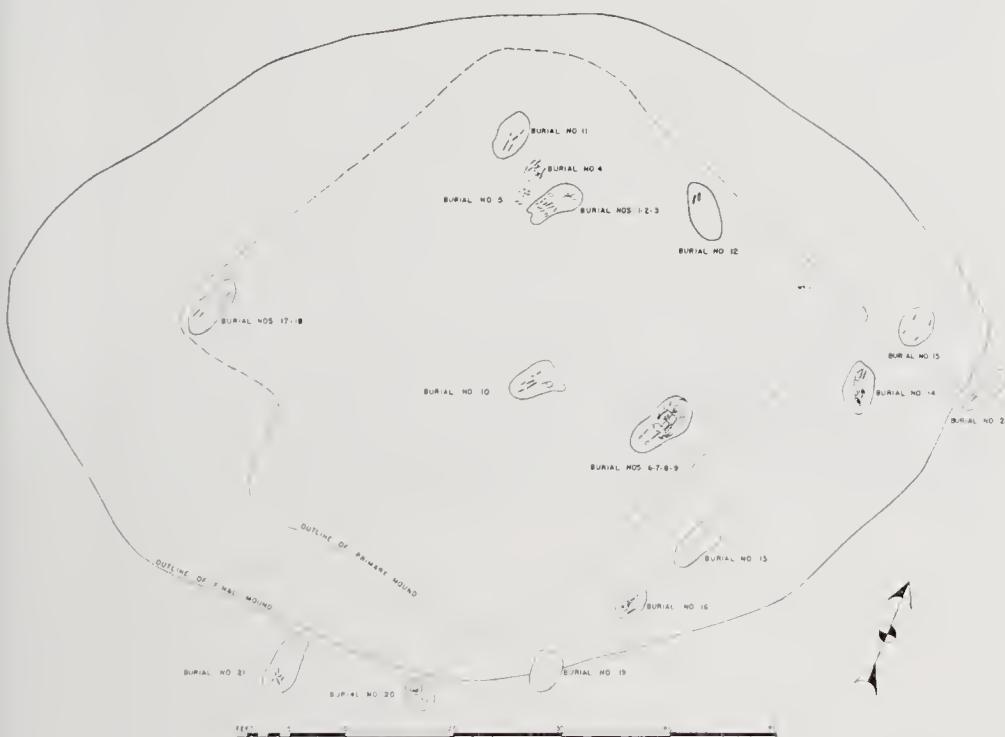


Figure 53. Horizontal outline of burial mound showing burial placement.

Burial Nos. 1-3 were intrusive from the surface of *Fill No. 1*. Burial Nos. 4-5 were inclusive in *Fill No. 2*. All others within the mound were intrusive from the surface of *Fill No. 2*.

**Burial Nos. 1-3.** Burial Nos. 1-3 were in a pit which had been dug into the north corner of the primary mound before *Fill No. 2* was added. The pit was oblong, its long axis running northeast-

southwest, and measured 5 feet in length, 2 feet in width, and 2.4 feet in depth.

Burial No. 1 was an extended adult female. Burial Nos. 2 and 3 were reburials consisting of skull fragments and long-bones of two adult males. The female was extended on the back, head to the northeast. One of the male reburials (Burial No. 2) had been placed at the right leg of the female, and the other male reburial (Burial No. 3) had been placed at the left leg of the female. All three burials were oriented northeast-southwest.



Figure 54. Burial Nos. 1, 2 and 3, an extended female burial and two male reburials. Intrusive from top of *Fill No. 1* of the burial mound. Shell-tempered bowl, shell beads, and stone discoidal associated. *Field photograph, October 23, 1940.*

Associated with the female were a shallow, incised, shell-tempered bowl lying at the left side of the head, a few shell beads at the neck, and a large discoidal of fossiliferous limestone at the right elbow.

**Burial Nos. 4 and 5.** These were the only truly inclusive burials in the mound. They were reburials which had been laid down during construction of *Fill No. 2* and covered with additional mound material. Both were young adult males. Burial No. 4

consisted of 4 teeth, a few skull fragments, and badly decayed long-bones. Burial No. 5 consisted of long-bone fragments only. Both burials were in the north quarter of the mound, Burial No. 4 being 1.5 feet above the surface of the primary mound and Burial No. 5 one foot above Burial No. 4.

**Burial Nos. 6-9.** These burials were in a pit that had been put down from the top of *Fill No. 2*, or from the surface of the final mound. The pit, which was in the southeast quarter of the mound, was oblong, its long axis running northeast-southwest. It measured 6.2 feet in length, 3.5 feet in width, and 1.5 feet in depth.

Burial No. 6 was in a relatively good state of preservation and yielded one of the two measurable skulls found at the Bessemer Site. The burial was that of a young adult female lying extended on the back, head to the northeast. Over the right arm was the fragmentary skeleton of a child (Burial No. 7), over the left breast position was the fragmentary skeleton of another child (Burial No. 8), and near the left side was the poorly preserved skeleton of a third child (Burial No. 9).

Burial Nos. 7 and 8 were extended, facing the adult. Burial No. 9 was in a flexed position facing the left arm of the adult. The child burials were oriented the same way as the adult, the heads to the northeast.

Associated with the adult burial were a deep shell-tempered bowl and a broken water bottle at the right of the head, and two shell-tempered water bottles near the left shoulder.

**Burial No. 10.** This burial was in a pit extending down from the surface of the mound near its center. The pit was oblong, its long axis running northeast-southwest. The pit measured 4.4 feet in length, 2.5 feet in width and 2.8 feet in depth.

The burial was that of an adolescent. Only a few tooth crowns and traces of decayed long-bones remained. The tooth crowns were at the northeast end of the pit. The long-bone traces indicated an extended burial.



Figure 55. Burial Nos. 6, 7, 8 and 9. An extended adult female burial with a child burial near each forearm and skull of a third child near the left arm of the adult. The adult burial yielded one of the two measurable skulls found at the Bessemer Site. Shell-tempered pottery associated. Pit intrusive from surface of burial mound. *Field photograph, August 30, 1940.*

At the left shoulder position, a few inches south of the tooth crowns, was a crushed shell-tempered bowl.

**Burial No. 11.** Burial No. 11 was in a pit extending from the surface of *Fill No. 2* near its north edge. The pit intruded into the primary mound (*Fill No. 1*). The pit was oblong, its long axis running northeast-southwest, and measured 4.5 feet in length, 2.2 feet in width, and 3.2 feet in depth.

The burial was that of a young adult and consisted of tooth crowns and a few long-bone fragments. The tooth crowns were in the northern portion of the pit, the long-bone fragments in the southern portion.

Over the tooth crowns was a copper plate with a few fragments of textile adhering to its underside.

**Burial No. 12.** This burial was in a pit put down from the surface of *Fill No. 2* in the northeast quarter of the mound. The pit intruded into the primary mound (*Fill No. 1*). The pit was oblong, its long axis running northwest-southeast, and measured 5.1 feet in length, 2.1 feet in width, and 2.8 feet in depth.

The burial consisted of two long-bone fragments at the northwest end of the pit.

**Burial No. 13.** Burial No. 13 was in a pit extending down from the southeast edge of the mound and intruding into the subsoil. The pit was oblong, its long axis running northeast-southwest, and measured 5 feet in length, 3 feet in width, and 2.8 feet in depth.

The burial was that of an adolescent and consisted of skull fragments, tooth crowns, and traces of arm and leg bones. The skull remains were at the northeast end of the pit. The traces of arm and leg bones indicated an extended burial.

**Burial No. 14.** Burial No. 14 was in a pit extending down from the east edge of the mound and intruding into the subsoil. The pit was oblong, its long axis running northwest-southeast, and measured 4.8 feet in length, 2.0 feet in width and 2.6 feet in depth.

The burial was that of a young adult and consisted of skull fragments, traces of the vertebral column, and badly decayed arm and leg bones. The skeleton lay on the right side in a partly flexed position, head at the south end of the pit.

**Burial No. 15.** This burial was in another pit put down near the eastern periphery of the mound and intruded into the subsoil. The pit was oval in shape, its long axis running northeast-southwest, and measured 4.5 feet in length, 3.5 feet in width, and 2 feet in depth.

The burial consisted of 4 long-bone fragments so widely separated that the manner of interment could not be determined.

**Burial No. 16.** Burial No. 16 was in a pit extending down from the surface of the mound near its southern periphery and intruding into the subsoil, cutting into 3 post holes of the stockade pattern

The pit was oblong, its long axis running northeast-southwest, and measured 2.5 feet in length, 1.3 feet in width, and 1.5 feet in depth.

The burial was that of a child. The skeleton was badly decayed. It lay on the right side in a flexed position, head at the southwest end of the pit and facing north.

**Burial Nos. 17 and 18.** These burials were in a pit extending down from the surface of the mound near its western end and intruding into the subsoil. The pit was oblong, its long axis running northeast-southwest, and measured 5.0 feet in length, 2.0 feet in width and 3.5 feet in depth.

Burial No. 17 was the fragmentary skeleton of an adult and lay along the southeast side of the pit. Burial No. 18 was the fragmentary skeleton of a young adult and lay along the northwest side of the pit. Both burials were extended on the back, head to the northeast.

Associated with Burial No. 17 were two shell-tempered bowls lying at the left side of the head.

**Burial No. 19.** Burial No. 19 was in a pit at the southern periphery of the mound. Half of the pit (longitudinally) was in the mound and the other half was outside the mound. The pit intruded into the subsoil. It was oblong, its long axis running north-south, and measured 4.5 feet in length, 3.2 feet in width, and 2.8 feet in depth.

The burial consisted of a few skull fragments and teeth of a young adult. These remains were at the north end of the pit.

**Burial No. 20.** Burial No. 20 was in a small pit just outside the southern periphery of the mound. The pit extended from the surface of the ground into the subsoil. It was oval in shape, its long axis running east-west, and measured 2.2 feet in length, 1.6 feet in width, and 3.0 feet in depth.

The burial consisted of the fragmentary skull of a young adult. This fragmentary skull lay at the west end of the pit. There was no evidence of any other skeletal material, and since the pit was so small it is probable that this was an isolated-skull burial.

A large, engraved, shell-tempered bowl was inverted over the skull, and the upper portion of a water bottle lay at the east end of the pit.

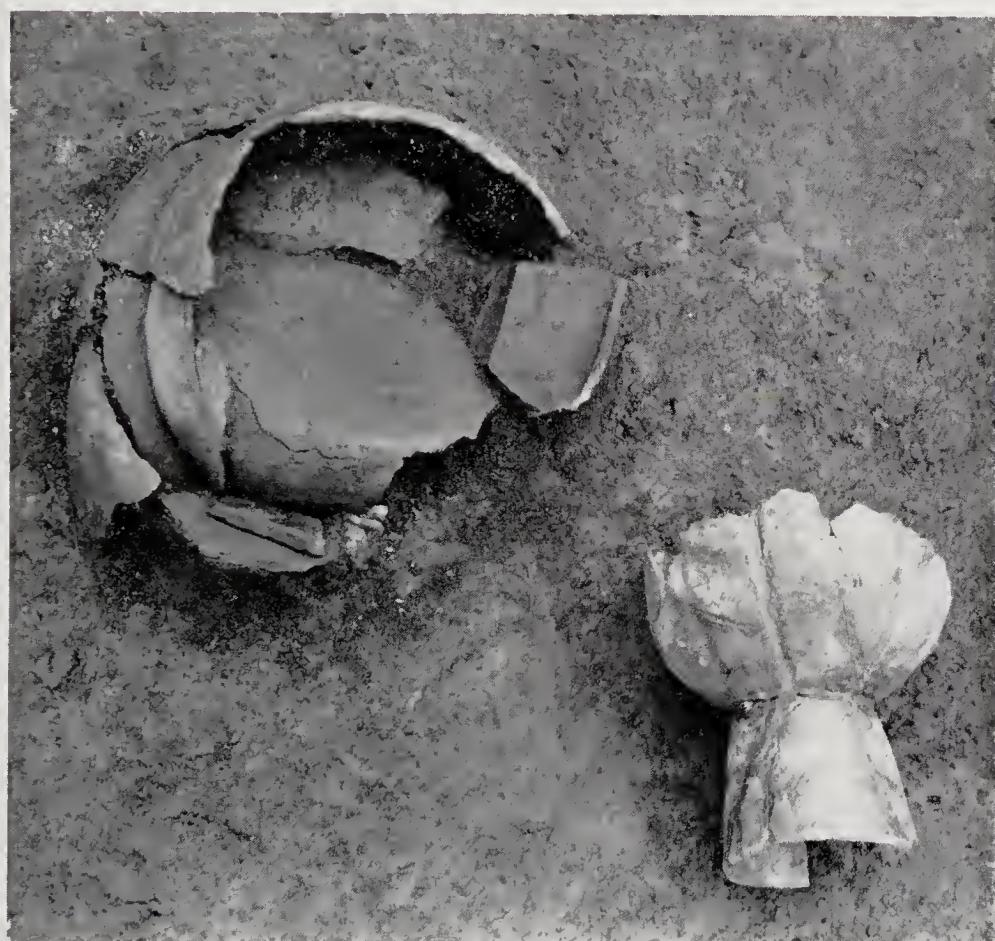


Figure 56. Shell-tempered bowl inverted over fragmentary skull, Burial No. 20. Shell-tempered water bottle associated. Pit just outside burial mound.

*Field photograph, February 12, 1940.*

**Burial No. 21.** Burial No. 21 was in another pit just outside the south side of the mound and about 12 feet from Burial No. 20. The pit extended into the subsoil. It was oblong, its long axis running north-south, and measured 5.3 feet in length, 2.4 feet in width, and 3.0 feet in depth.

The burial consisted of skull fragments and long-bone frag-

ments of a young adult. The skull fragments were at the north end of the pit and the long-bone fragments were in the south half of the pit. This placement, together with the shape of the pit, suggests an extended burial position.

**Burial No. 22.** Burial No. 22 was in a pit outside the east end of the mound. The pit extended from the surface of the ground into the subsoil. It was oblong, its long axis running northeast-southwest, and measured 4.5 feet in length, 2.0 feet in width, and 2.2 feet in depth.

The burial consisted of skull fragments and long-bone fragments of a young adult female. The skull fragments were at the south end of the pit. This placement, together with the shape of the pit, suggests an extended burial position.

#### Miscellaneous Cultural Material in Burial Mound

In addition to burial associations the following artifacts were found during the excavation of the burial mound:

old humus layer—	
celt, crude, greenstone	1
projectile points, stemmed	5
Fill No. 1—	
antler tips, worn	3
celt, broken, greenstone	1
projectile points, stemmed	3
projectile points, triangular	7
Fill No. 2—	
celts, broken, greenstone	4
pottery vessel, small beaker	1

Laboratory studies of all burials and artifacts found in the burial mound are given in *Chapter V*.

## CHAPTER V

## SUMMARY-ANALYSIS OF THE BESSEMER SITE

*MOUND COMPLEX*

Three mound types were represented at the Bessemer Site: ceremonial, domiciliary, and burial.

**Ceremonial Mound.** The mound called "ceremonial" was so termed because its shape and structure suggested no purpose other than ceremonial. The stone floor itself must have had ceremonial significance, and succeeding levels contained nothing that would mark the mound as a domiciliary or burial type.

**Domiciliary Mound.** The domiciliary mound contained nothing but domiciliary features, all but the last of its six different levels showing evidence of having served as substructures for houses. A special feature of the mound structure was the ramp leading up to the top of the first level.

**Burial Mound.** The burial mound had, in addition to its burial manifestations, ceremonial implications in its structure form, the first fill being a small truncated pyramid which had been enclosed by a double row of posts.

*ARCHITECTURAL COMPLEX*

Architectural features included rectilinear structure patterns, circular structure patterns, small stockade or enclosing fence patterns, and numerous fragmentary structure patterns.

**Distribution of Architectural Features.** In the domiciliary mound levels were 3 complete rectilinear patterns. In the village areas were the following complete patterns:

rectilinear	17
circular	2
stockade or enclosing fence	2

**Typical Structure Pattern.** The typical structure pattern was rectangular, was outlined by entrenched post molds, contained interior post holes, and had no definite floor stratum. All of the patterns contained in the domiciliary mound, and most of the patterns in the village area, were of this type.

**Other Structure Patterns.** One rectilinear pattern in the village area consisted of wall trenches only, no post molds being evident. This pattern may have represented an uncompleted structure, or a structure whose sides were made of "bark slabs, brush, or similar materials".<sup>1</sup> Another rectilinear structure in the village area was outlined by individually set post holes. Two rectilinear patterns in the village area outlined prepared floors of hard-packed, red clay.

**Miscellaneous Architectural Features.** Burned clay showing wattle impressions was scattered throughout the village areas and in the domiciliary mound.

Associated with the complete and partial structure patterns of the entire site were 10 fire basins, 7 of which were within the domiciliary mound.

Associated with one of the complete rectilinear patterns in the village area was a clay seat.

**The Small Stockades.** Both of the small stockade or enclosing fence patterns represent, in part at least, double rows of posts. One of the small stockades was associated with a rectilinear structure near the domiciliary mound, and terminated at one end of that structure. The other small stockade surrounded the first fill of the burial mound.

#### BURIAL COMPLEX

Twenty-two of the 25 burials found at the Bessemer Site were in or near the burial mound. The other three were in or near the ceremonial mound.

**Burial Positions.** Most of the burials were extended or partially flexed. There were 7 reburials and one skull burial. Eleven of the 25 burials were in groups of 2, 3 and 4.

**Burial Offerings.** Burial offerings were, for the most part, pottery vessels. Other burial offerings included 38 shell beads, a limestone discoidal, a sheet-copper plate to which fragments of textile adhered. Detailed descriptions of the pottery vessels found as burial associations are given under the pottery analysis. Descriptions of the other burial associations are given under a discussion of the ceremonial complex.

**Physical Anthropological Study.** The measurable skeletal material is as follows:

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<sup>1</sup>As proposed for similar patterns reported by Fay-Cooper Cole and Thorne Deuel in *Rediscovering Illinois*, p. 116.

## Measurable Skeletal Material

Burials	Measurable Portions
Burial No. 1 (adult female from ceremonial mound)	skull
Burial No. 2 (adult male from near ceremonial mound)	femora, humeri, right radius
Burial No. 3 (adolescent female from near ceremonial mound)	left radius
Burial No. 6 (young adult female from burial mound).	skull

Measurements and indices of this material are given in the following tables<sup>1</sup>:

## Cranial Measurements

Obtainable Notation	Measurement (in mm.)	Measurement (in mm.)
	Burial No. 1, Ceremonial Mound	Burial No. 6, Burial Mound
Transverse arc .....	294	305
Sagittal arc .....	313	
Head length .....	166	
Head breadth .....	140	141
Bizygomatic .....	124	124
Bigonial .....		99
Frontal chord .....	89	
Basion-bregma .....	128	
Basion-nasion .....	98	
Total facial height .....		115
Upper facial height .....		68
Nasal height .....		49
Nasal breadth .....		22
Palate, external length .....		53
Palate, external breadth .....		60
Condyllo-symphysial length .....		104
Height of symphysis .....		36
Bicondylar breadth .....		115
Bigonial breadth .....		99
Minimum breadth, ascending ramus .....		36
Mean Mandibular Angle .....		139 degrees

<sup>1</sup>All measurements by Dr. Charles E. Snow, Physical Anthropologist, Alabama Museum—WPA Archaeological Laboratory, Birmingham, Alabama.

## Cranial Indices

Obtainable Notation	Burial No. 1, Ceremonial Mound	Burial No. 6, Burial Mound
Cranial	84.4	
Length-height	77.1	
Breadth-height	91.5	
Cranial module	144.6	
Fronto-parietal	82.7	
Zygo-gonial		79.84
Cranio-facial	92.9	87.94
Total facial		85.82
Upper facial		58.84
Nasal		44.90
External palatal		113.21
Mandibular		90.44

## Long-Bone Measurements and Indices

Bone	Obtainable Notation	Measurement (in mm.) Burial No. 2, near Cere- monial Mound
Femur (right)	Maximum diameter, head	48
	Middle circumference	91*
Femur (left)	Maximum length	461*
	Maximum diameter, head	46
Humerus (right)	Middle circumference	95
	Maximum length	326
Humerus (left)	Maximum diameter, head	46
	Maximum middle	25
	Minimum middle	18
	Middle circumference	69
	MIDDLE INDEX—72	
	Maximum length	324
	Maximum diameter, head	46
	Maximum middle	23
	Minimum middle	16
	Middle circumference	64
	MIDDLE INDEX—70	

\*Approximated measurement.



Figure 57. Front and side views of skull, Burial No. 6 from the burial mound.  
An adult female, estimated age 22 years.

On the basis of such scant skeletal material, the formulation of a typical physical type for the Bessemer Site would not be reliable, especially since the two measurable skulls are female. All obtainable measurements, however, indicate that the physical type represented at Bessemer may be closely related to the "Koger Island" type<sup>1</sup> and a similar brachycranic type at Moundville.

#### CEREMONIAL COMPLEX

Ceremonial manifestations included, in addition to those displayed by the burials themselves and their associations: a mound that must have been erected solely for ceremonial reasons; the remains of 2 small stockades or enclosing fences that may have been connected with ceremonial rites; red and yellow ochre fragments; 1 pottery and 2 sandstone discoidals.

<sup>1</sup>Described by M. T. Newman and C. E. Snow in "A Preliminary Report on the Skeletal Remains from the Pickwick Basin" included as a section in William S. Webb and David L. DeJarnette, "An Archaeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi, and Tennessee", *Bureau of American Ethnology, Bulletin 129* (in press).

POTTERY DISCOIDAL—plain, shell-tempered ware; crudely rounded; 47 mm. in diameter, 5 mm. thick.

SANDSTONE DISCOIDALS—smoothly ground; one 78 mm. in diameter and 30 mm. thick; other 75 mm. in diameter and 22 mm. thick.

LIMESTONE DISCOIDAL (*associated with Burial No. 1 of the burial mound*)—fossiliferous limestone; 107 mm. in diameter, 23 mm. thick.

SHELL BEADS (*associated with Burial No. 1 of the burial mound*)—conch columella; oblate spheroid; biconically drilled; 6-13 mm. in diameter; 7-17 mm. in length.<sup>1</sup>



Figure 58. CEREMONIAL OBJECTS and BURIAL ASSOCIATIONS. Top: limestone discoidal (*associated with Burial No. 1 of the burial mound*), 2 sandstone discoids. Bottom: shell beads (*associated with Burial No. 1 of the burial mound*), fragments of copper plate (*associated with Burial No. 11 of the burial mound*).

<sup>1</sup>These shell beads represent the only salt-water shell found at the site. All fresh-water shell found is unworked and includes the following species: *Amblema perplicata* Conrad, *Micromya licinosa* Conrad, *Pleurobema hagleri* Frierson.

**COPPER PLATE** (*associated with Burial No. 11 of the burial mound*)

—fragments of 2 semi-circular halves which were probably held together by textile; cane mat fragment, twilled plaiting, adhering to underside of plate; embossed corrugations or flutes from center to periphery; each half of plate has a maximum length of 250 mm. and a maximum width of 190 mm.

**HUNTING AND AGRICULTURAL COMPLEX**

Projectile points, a few deer bone, one bit of charred corncob, a greenstone hoe, and 21 whole, broken and fragmentary celts (described under *economic complex*) make up the Bessemer Site hunting and agricultural manifestations.

Very few projectile points were recovered during the excavation, but the authors have examined over a hundred small, triangular points which local residents had collected from the surface of the site during the past few years. Of the 31 points recovered during the excavation 15 were of the small, triangular, Mississippian type, 15 were of the medium-sized, stemmed, Woodland type, and 1 was side-notched.<sup>1</sup>

**TRIANGULAR POINTS**—chert and flint; sizes range from 27 x 13 mm. to 47 x 21 mm.; average size 30 x 16 mm.

**STEMMED POINTS**—chert, flint, jasper and quartzite; sizes range from 35 x 25 mm. to 55 x 34 mm.; average size 45 x 25 mm.; stems expanding to contracting.<sup>2</sup> One of the points has a serrated blade.

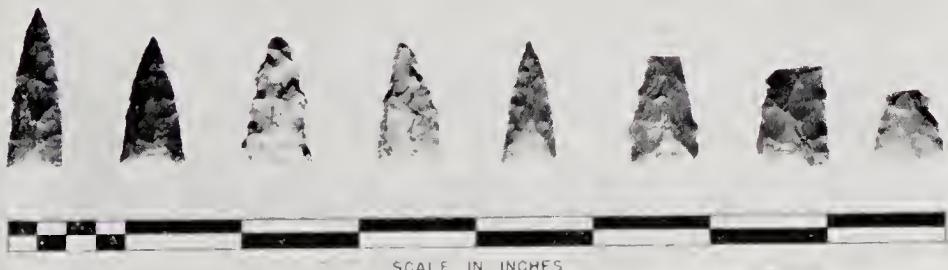


Figure 59. Typical Mississippian points found during the Bessemer excavations.

<sup>1</sup>These stemmed projectile points, and 1 side-notched point, together with a few limestone-tempered sherds, constitute the only "Woodland" material found at the Bessemer site.

<sup>2</sup>By *expanding stem* is meant a stem that decreases in width from the base to the blade. Similarly, a *contracting stem* increases in width from the base to the blade.

SIDE-NOTCHED POINT—flint; upper half broken off, length indeterminate; 23 mm. wide; one small notch just above either side of base.



Figure 60. Typical "Woodland" points found during the Bessemer excavations.

#### *ECONOMIC COMPLEX*

Objects of utilitarian import, other than pottery vessels, are: 1 sand-tempered pottery trowel, flat end measuring 42 mm. in diameter, stem 40 mm.; 3 antler tines with worn tips; and a number of stone objects.

The stone objects are:

ABRADERS—1 flat smoothing stone and 1 large pebble, both sandstone; flat stone 80 x 65 mm.; rounded stone 80 x 90 mm.

CELT S—3 greenstone, 17 broken greenstone; 1 fragment of a ground sandstone celt. Several showed that they had been shaped by chipping, and subsequently ground. General shape flattened, rectanguloid or trianguloid; cross sections ellipsoidal; bits tapered; butts rounding, pointed; approximate sizes of celts range from 100 to 150 mm. in length and 50 to 75 mm. in width, average thickness being 23 mm.

HOE—greenstone, fragment of blade; chipped and crudely ground; undetermined length; 100 mm. wide, 12 mm. thick. This may be part of a large celt.

KNIVES OR BLADES—2 flint, 1 chert; all crudely chipped; trianguloid; 40 x 27 mm.; 60 x 35 mm.; 38 x 60 mm.

LAPSTONES—2; sandstone; one approximately square, conoidal depressions on 2 sides; other a river pebble with 1 conoidal depression; square lapstone 70 x 40 mm.; pebble 110 x 85 mm.

PESTLE—quartz cobblestone; tapered end used for pecking, flat end used for abrading or grinding; 100 mm. high, 70 mm. maximum diameter.

SCRAPER—jasper end- or snub-nosed-scraper; 20 mm. in length; 14 mm. in width.



Figure 61. STONE IMPLEMENTS. Top: Greenstone celts. Bottom: cobblestone pestle, pebble abrader, 2 sandstone lapstones, flint and chert knives.

#### *POTTERY COMPLEX*

Thirteen whole or restorable pottery vessels and 2,587 potsherds were recovered at the Bessemer Site.

**Distribution by Temper.** All of the whole or restorable vessels are shell-tempered, and, with the exception of two vessels

found in the ceremonial mound, were found in or near the burial mound. Distribution (by temper) of the 2,587 sherds recovered was as follows:

#### Sherds from Mounds\*

Tempering Material	Number of Sherds	Per cent
Shell	704	60.74
Clay-grit	433	37.36
Sand	22	1.90
Limestone	0	—
Total	1,159	100.00

#### Sherds from Old Humus Layer

Tempering Material	Number of Sherds	Per cent
Shell	602	42.13
Clay-grit	800	56.03**
Sand	20	1.41
Limestone	6	0.43
Total	1,428	100.00

\*Although the sherds were collected by levels—mound fills, etc.—statistical studies revealed no temper- (or decorative-) type division by mound levels.

\*\*The percentage comparison of shell- and clay-grit-tempered pottery in the old humus layer may be misleading. A large number of shell-tempered sherds in the village areas had undoubtedly been destroyed by plowing and exposure to weather conditions. Clay-grit-tempered ware is, by nature, less susceptible to such destruction.

**Decorative Types.** Decorative types represented at the Bessemer site are shown in the following table.

Decorative Types, Bessemer Site Pottery

Temper	Type	Number of Sherds	Whole or Restorable Vessels
Shell-Tempered	Warrior Plain .....	1,075	3
	Moundville Incised .....	157	
	McKee Island Punctated .....	1	
	Moundville Filmed .....	59	3
	Moundville Filmed Incised .....	14	6
	Moundville Filmed Hemagraved* .....		1
Total		1,306	13
Clay-Grit-Tempered	McKelvey Plain .....	1,228	
	Benson Punctated .....	1	
	Mulberry Creek Cord-Marked .....	2	
	San Souci Brushed .....	2	
Total		1,233	
Sand-Tempered	O'Neal Plain .....	21	
	Sauty Check-Stamped .....	20	
	Hardin Complicated-Stamped .....	1	
Total		42	
Limestone-Tempered	Long Branch Fabric-Impressed .....	1	
	Pickwick Complicated-Stamped .....	5	
Total		6	
Grand Total		2,587	13

\*“Hemagraved”—a term derived from HEMAtite and enGRAVED. The decoration consists of engraved lines filled with hematitic paint.

*Shell-Tempered Ware*

*General Description.* The shell-tempered sherds found in the village areas are badly weathered. This condition is obviously due to the percolating of ground waters, and exposure to annual plowing. Nearly all of the shell is leached from these sherds, and the paste is extremely friable, having a degree of less than 1 in the hardness scale. Many of the sherds crumbled immediately upon removal from the ground and it was impossible to save a large number of them. Those sherds in and beneath the mounds were comparatively well preserved and noticeably harder.

Thickness of the shell-tempered ware varies from 3 to 9 mm. The shell aplastic makes up from 25 to 50 per cent of the mass, and consists of pulverized shell. The flaky fragments of shell range from "dust" to flakes 4 mm. in diameter. Surfaces of the sherds are smoothed, and slightly to heavily pitted by the leaching of the shell. Fire-clouding appears on both surfaces.

*Vessel Forms Represented.* Varied vessel forms, ranging from shallow bowls to high-necked water bottles, are represented. Lips are usually rounded. Rims, when present, vary from straight to extremely flared.

*Decorative Types.* Detailed descriptions of decorative types represented in shell-tempered ware from the Bessemer Site follow.

*WARRIOR PLAIN—*

Paste: Texture—mediumly fine

Color—light to dark gray; surface oxidized (by firing) to shades of reddish brown; the surface color usually penetrates 1 to 2 mm. into the core.

Thickness: 5 to 9 mm.

Surface: smoothed, undecorated

Form: small to medium-sized jars

Appendages: paired handles

This type includes 137 rim sherds, 17 of which have handles attached. The rims range from low, straight, thickened types to high rims with or without applique rim-strips. Rim heights range from  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches.

Of the 17 handles, 15 were strap handles and 2 were loop handles. Both types were molded in such a way that they were continuous with the lips, and welded or "pasted" to the shoulders. They were 1 to 1½ inches long. On some of the strap handles were 1 to 3 nodes that had been formed either by pinching or by notching horizontal ridges parallel to the lip.

Several of the plain body sherds probably represent pieces from plain portions of decorated vessels.

#### *MOUNDVILLE INCISED—*

Paste: Texture—mediumly fine

Color—same as *Warrior Plain*

Thickness: 5 to 9 mm.

Surface: smoothed before incising

Form: sherds indicate small to medium-sized jars

Appendages: paired handles

Decoration: incising confined to the shoulder and occasionally the rim. Trailed or incised arches with or without radiating incised line. On one sherd the arches are followed by a row of small round punctations. The deeply trailed arches are troweled smooth, leaving a shoulder and giving the jars a lobed appearance. Except for the decoration, this incised ware is identical to the plain ware.

Eight strap handles and one loop handle occur in the incised ware and are similar to the handles of the plain ware (*Warrior Plain*). Other similarities of the incised and plain ware are thickness and vessel form.

#### *MCKEE ISLAND PUNCTATED—*

The one body sherd which represents this type is too small to suggest any form. The sherd is decorated with round punctations, 4 mm. in diameter, which penetrate more than halfway through the sherd. In all other respects the sherd is identical to the plain ware (*Warrior Plain*).

#### *MOUNDVILLE FILMED—*

Paste: Texture—fine to mediumly fine

Color—the core is light gray to nearly black. The surface beneath the black film is oxidized to a buff to red color

Thickness: 3 to 6 mm.

Surface: smoothed and covered with a slip or thin coating of black paint

Form: plates, bowls, beakers, small jars and water bottles

Appendages: none

The filmed ware is thinner and finer-textured than the unfilmed ware, and is generally characterized by small vessel forms.

The black film is present either on the interior or on both surfaces of shallow forms, and only on the exterior of deep forms. The film consists of a slip or thin coating of black paint. The color of the film penetrates to various depths into the paste and it is therefore probable that organic paint was used, since mineral paint is not usually penetrative. Since no evidence of brush strokes are found, the paint may have been applied by dipping or washing. Oxidized areas beneath the film show that the paint was applied after firing. When the sherds were refired in the laboratory the film oxidized and became indistinguishable from the reddish-colored surface beneath it.

#### MOUNDVILLE FILMED INCISED—

This type is identical to *Moundville Filmed*, except that the surface is decorated. The decoration consists of lines incised before firing. The placement of the decoration on the vessel varies with the vessel forms. On plates the decoration is confined to the upper side of the rim, and is usually a series of chevrons which are sometimes filled with parallel lines. On beakers (cups) the decoration is a series of parallel lines encircling the entire vessel or confined to the upper one-fourth of the vessel. On water bottles the decoration is confined to the central portion of the body, and consists of loops, scrolls, and concentric circles.

#### MOUNDVILLE FILMED HEMAGRAVED—

This decorative type is represented on one large bowl. It differs from the decoration on black-filmed incised ware only in technique of application, lines having been engraved after the vessel had been fired and filmed instead of being incised while the vessel was plastic. The engraved lines are rectilinear, and are filled with hematitic paint.



Figure 62. SHELL-TEMPERED WARE. Top Row: *Warrior Plain*.  
Bottom Row: *Moundville Incised*.



Figure 63. SHELL-TEMPERED WARE. Top Row: *Moundville Filmed*.  
Bottom Row: *Moundville Filmed Incised*.



Figure 64. RESTORED SHELL-TEMPERED VESSELS. Top: Vessel No. 1 and Vessel No. 11. Bottom: Vessel No. 8 and Vessel No. 7. Vessel No. 1 is *Warrior Plain*. The other three vessels are *Moundville* *Filmed Incised*.

*Whole or restorable Vessels.* Descriptions of the whole or restorable shell-tempered vessels are as follows:

*Warrior Plain:*

*Vessel No. 1*—This is one of the two vessels associated with the one burial in the ceremonial mound. It is a small two-handled jar  $3\frac{1}{2}$  inches high and  $5\frac{1}{2}$  inches in diameter. The paired strap handles are 1 inch long and  $\frac{5}{8}$  inch wide. See Figures 64 and 65.

*Vessel No. 2*—This is the second of the two vessels associated with the one burial in the ceremonial mound. It is a small jar more crudely made than Vessel No. 1. It is 3 inches high and 5 inches in diameter. Its crude rim was formed by pinching clay at the top of the body.

*Vessel No. 3*—Only about one-third of this badly weathered vessel was recovered. It was found with Burial No. 10 in the burial mound. It is a small deep bowl approximately  $3\frac{1}{2}$  inches high. It is straight-sided, with a rounding base approximately 5 inches in diameter.

*Moundville Filmed:*

*Vessel No. 4*—This is one of two vessels associated with the group burial (Burial Nos. 6-9) in the burial mound. It is a water bottle  $7\frac{1}{2}$  inches high and 6 inches in maximum diameter. The exterior surface is badly weathered but shows a trace of black film. The interior is not filmed. The paste is about 5 mm. thick. The body is teardrop or pointed-globular in shape. The neck portion flares outward from the body to the lip. The vessel has a constricted base 3 inches in diameter and  $\frac{1}{4}$  inch high. See Figure 65.

*Vessel No. 5*—This is the second of the two vessels associated with the group burial (Burial Nos. 6-9) in the burial mound. It is the body and base of a water bottle slightly smaller than Vessel No. 4, being 5 inches in diameter. The paste is exceptionally fine-textured and tempered with minute fragments of shell. Thickness is 2 to 3 mm. The film is glossy and well preserved. The interior of the vessel is not filmed.

*Vessel No. 6*—This is a shallow, weathered bowl which was associated with Burial No. 18 in the burial mound. It is 2 inches deep and  $7\frac{1}{2}$  inches in diameter. Both the exterior and interior are filmed.

*Moundville Filmed Incised:*

*Vessel No. 7*—This is a small beaker having a shape like a modern flower pot, and found inclusive in Fill No. 2 of the burial mound. It was not associated with any burial. It is  $3\frac{1}{2}$  inches high, 4

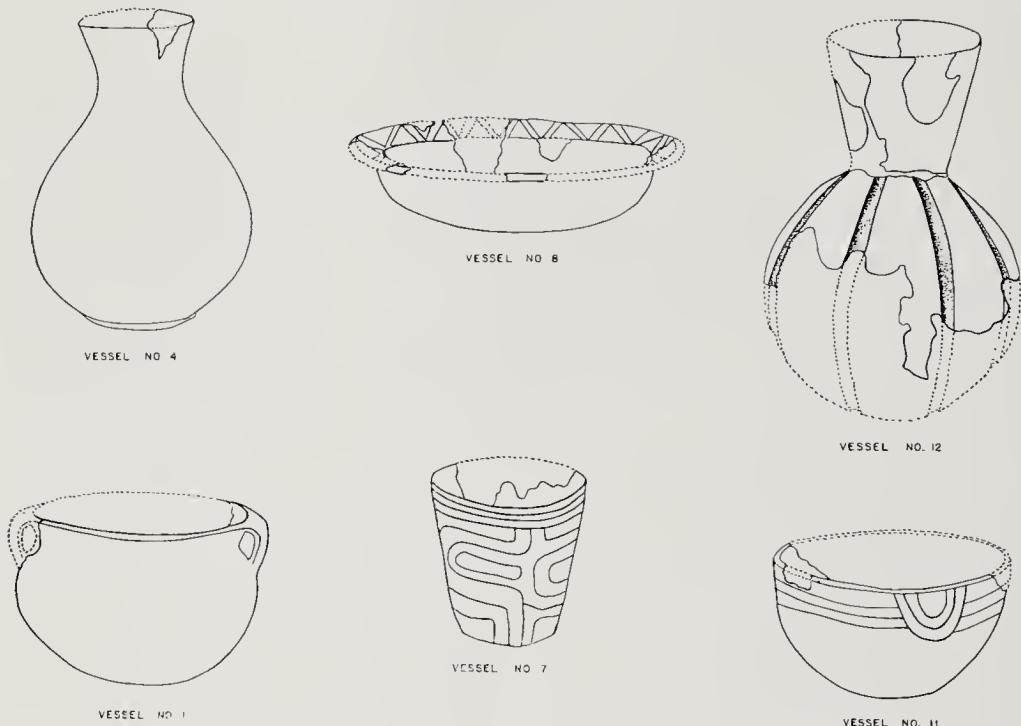


Figure 65. Vessel forms, restorable vessels from the Bessemer Site.

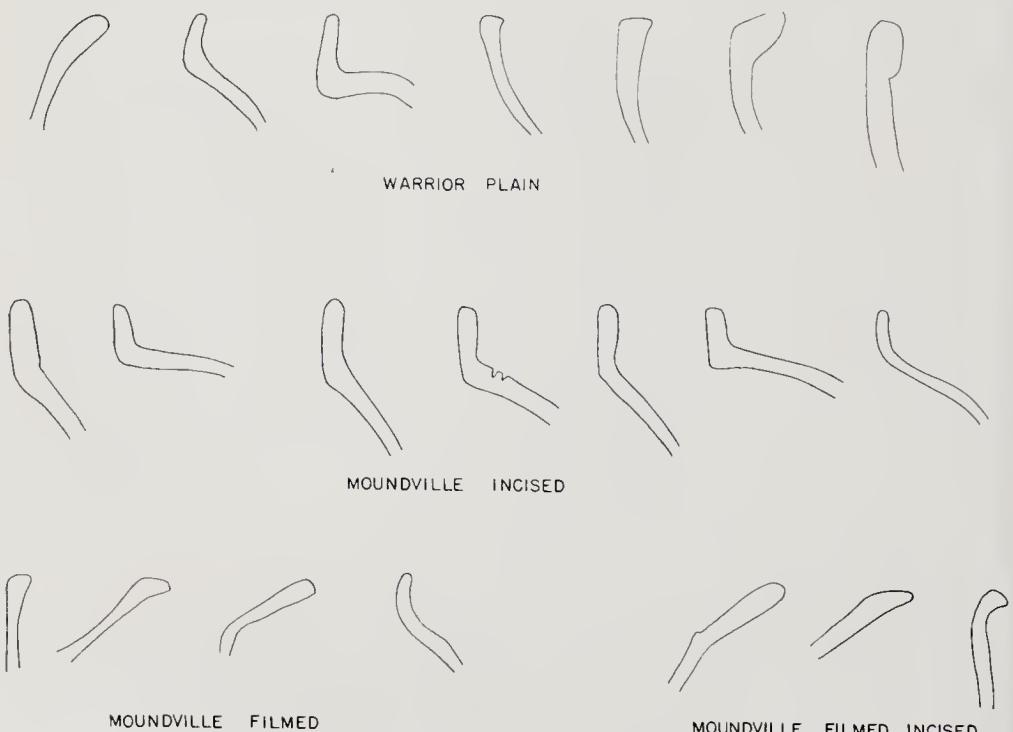


Figure 66. Rim profiles, shell-tempered ware from the Bessemer Site.  
Rim interiors to the left.

inches in top diameter and 3 inches in diameter at the base. The base is flat, and the straight sides flare outward from the bottom to the top. Crudely incised lines about  $\frac{1}{4}$  inch apart describe modified scrolls which entirely cover the outer side of the vessel. Both the exterior and interior of the vessel show traces of film. *See Figures 64 and 65.*

*Vessel No. 8*—This is a shallow bowl found with a group burial (Burial Nos. 1, 2, 3) in the burial mound. It is 2 inches high and  $8\frac{3}{4}$  inches in diameter. Its rim is 1 inch wide and flares outward, horizontally. Two parallel lines form a chain of chevrons on the upper side of the rim. The exterior surface shows no trace of film. *See Figures 64 and 65.*

*Vessel No. 9*—This is an extremely weathered water bottle found with a group burial (Burial Nos. 6, 7, 8, 9) in the burial mound. It was impossible to repair this vessel, because of its leached condition. The fragments suggest a form similar to that of Vessel No. 4, except that its base is rounding and continuous with the body, and the neck is straight. Boldly incised lines describe a series of scrolls around the middle portion of the body. The interior is not filmed.

*Vessel No. 10*—This is a fragmentary bowl associated with Burial No. 17 in the burial mound. It is approximately 3 inches high and 7 inches in diameter. Three parallel, incised lines describe a series of arches around the upper half of the exterior surface of the bowl. The black film is nearly worn off the bottom exterior surface.

*Vessel No. 11*—This moderately deep bowl was associated with a group burial (Burial Nos. 6, 7, 8, 9) in the burial mound. It is  $3\frac{1}{2}$  inches high and 6 inches in diameter. Three boldly incised, parallel lines spaced  $\frac{1}{4}$  inch apart encircle the upper one-fourth of the vessel. The lines are broken at one point by an inverted arch also formed of three parallel lines. This arch is  $2\frac{1}{2}$  inches wide and  $\frac{1}{2}$  inch deep. An arch similar to this may have been at the opposite side, which was broken. Only the exterior of the vessel is filmed. *See Figures 64 and 65.*

*Vessel No. 12*—This is the upper three-fourths of a water bottle associated with Burial No. 20 in the burial mound. The neck is  $3\frac{1}{2}$  inches high, 4 inches in the top diameter, and slightly flaring from the point where the neck is attached to the body. The body is  $7\frac{1}{2}$  inches in diameter. Grooves or flutes  $\frac{1}{4}$  inch wide and spaced 2 to 3 inches apart extend downward from the base of the neck. The exterior of the neck and body and the interior of the neck are filmed. Coiling fractures are very evident on this vessel. *See Figure 65.*

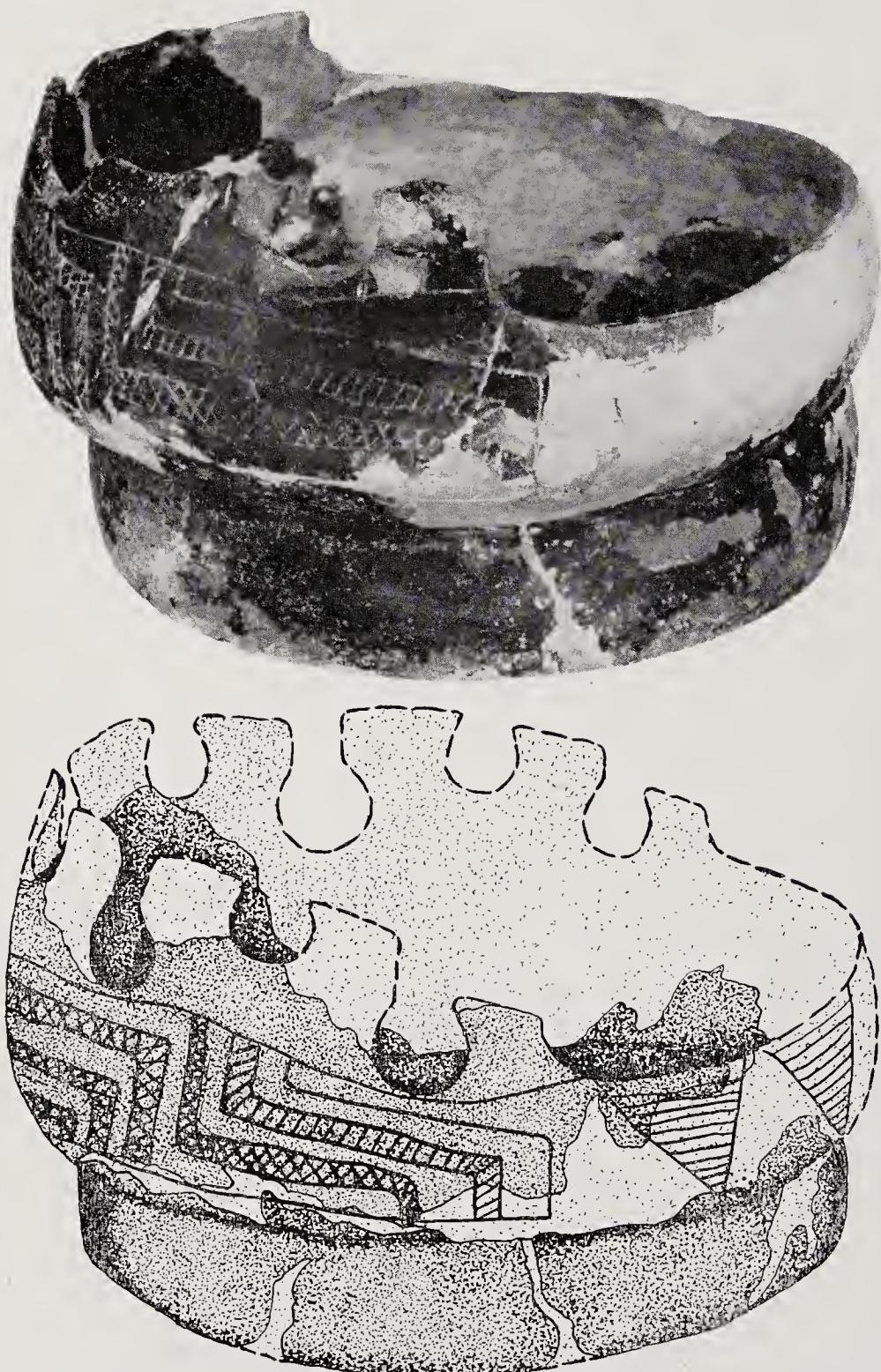


Figure 67. Vessel No. 13, (*Moundville Filmed Hemagraved*). Top: photograph of the partially restored vessel. Bottom: drawing of the vessel, reconstruction based on similar vessel from Moundville.

*Moundville Filmed Hemagraved:*

*Vessel No. 13*—This is a large vessel which was inverted over the skull constituting Burial No. 20 just outside the burial mound. It has an eccentric form, having the shape and appearance of a large bowl set on top of a smaller bowl. The "lower bowl" is 8 inches in diameter and  $2\frac{1}{4}$  inches high. It has a flat base and convex sides. The "upper bowl" is  $10\frac{1}{2}$  inches in diameter. The sides of the "upper bowl" are uneven, one side being  $2\frac{1}{4}$  inches high and the other 4 inches high. The higher side is decorated with groups of engraved rectilinear lines. Each group contains 6 parallel lines outlining a "step", and alternate spaces between the lines are crosshatched. Cut into the high side and open at the lip are three  $\frac{4}{5}$  circles having a diameter of 1 inch and spaced about 4 inches apart. The lower side is decorated with a series of engraved equilateral triangles with each apex toward the base. The triangles contain horizontal lines spaced about  $\frac{1}{8}$  inch apart. All engraved lines are filled with hematitic paint. See Figure 67.

*Clay-Grit-Tempered Ware*

*General Description.* Hardness of the clay-grit-tempered ware is 2.0 to 3.5 in the hardness scale. The surface is usually somewhat softer than the core. Aplastic material makes up from 10 to 50 per cent of the mass. The temper-particles vary from 0.5 to 2.5 mm. in diameter. They consist of pulverized, burned clay with frequent admixture of small round grains of white sand and nodules of manganese. The manganese nodules may have been in the clay itself, and not intentionally added as aplastic material. Sherd surfaces are generally smoothed, although the surfaces of some sherds are lumpy because of large temper-particles.

*Vessel Forms Represented.* Typical vessel form in clay-grit-tempered ware, as indicated by rim sherds, is a globular jar with a straight to flaring rim  $\frac{1}{2}$  to 2 inches high. Two rim sherds, however, suggest medium-sized, moderately deep bowls.

*Decorative Types.* Detailed descriptions of decorative types represented in clay-grit-tempered ware from the Bessemer Site follow:

*MCKELVEY PLAIN—*

Paste: Texture—mediumly coarse

Color—buff to dark brown; surface color penetrates 1 to 2 mm. into the core, which is usually almost the same color; fire-clouding almost invariably present.

Thickness: 3 to 9.5 mm.

Surface: smoothed, undecorated

Form: sherds indicate small to medium-sized jars

Appendages: paired handles

This type includes 13 handles. All are strap handles except one which is a loop handle. The strap handles are 1½ to 2½ inches long and ½ to 1 inch wide. The loop handle is ¾ inch long and ½ inch thick. Both types are molded in such a way that they are continuous with the lip of the vessel, and welded or riveted to the shoulder. Many of the strap handles have from 1 to 3 nodes on that portion of the handle near the lip. When 2 or 3 nodes are present they are lined up, either vertically or horizontally.

Of the 1,233 clay-grit-tempered sherds, 1,228 are *McKelvey Plain*. In every respect, except tempering, this type is similar to *Warrior Plain*.

Both types probably represent utilitarian ware, although 3 *Warrior Plain* vessels were found as burial associations.

*BENSON PUNCTATED—*

Only one sherd represents this type. It is identical to *McKelvey Plain* in texture, color, and thickness. Surfaces were smoothed before decorating. Decoration consists of punctations within boldly incised lines outlining zones.

*MULBERRY CREEK CORD-MARKED--*

Two sherds represent this type. They are identical to *McKelvey Plain* in color, texture, and thickness. Surfaces were smoothed before decorating. Decoration consists of cord impressions made with a cord-wrapped implement.

*SAN SOUCI BRUSHED—*

Two sherds represent this type. They are identical to *McKelvey Plain* in color, texture, and thickness. The surfaces bear "brushed" impressions probably made by twigs or cane splinters used in washing the vessels.



Figure 68. CLAY-GRIT-TEMPERED WARE. Large sherd in left-hand corner is *McKelvey Plain*. Others are, from top to bottom, *San Souci Brushed*, *Mulberry Creek Cord-Marked* and *Benson Punctated*.

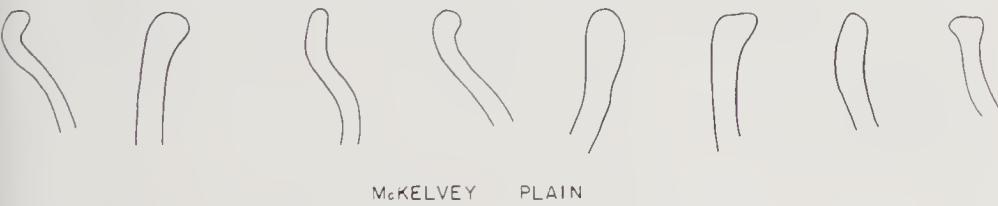


Figure 69. Rim profiles, clay-grit-tempered ware from the Bessemer Site. Rim interiors to the left.

#### *Sand-Tempered Ware*

*General Description.* Hardness of the sand-tempered ware is from 2.0 to 2.5 in the hardness scale. Tempering material makes up from 10 to 40 per cent of the mass, and consists of small, rounded grains of white sand, with occasional nodules of manganese oxide. The latter may have been a part of the clay itself. Surfaces of sherd s are smoothed but sandy.

*Vessel Forms Represented.* Body sherds in the sand-tempered ware suggest medium-sized vessels. The few rim sherds suggest small to medium-sized jars with straight rims, and medium-sized deep bowls having constricted mouths.

*Decorative Types.* Detailed descriptions of decorative types represented in sand-tempered ware from the Bessemer Site follow.

*O'NEAL PLAIN—*

Paste: Texture—mediumly fine

Color—reddish brown to dark brown, and gray to black; surface colors penetrate about 1 mm. into core; fire-clouding less frequent than on shell- and clay-grit-tempered wares.

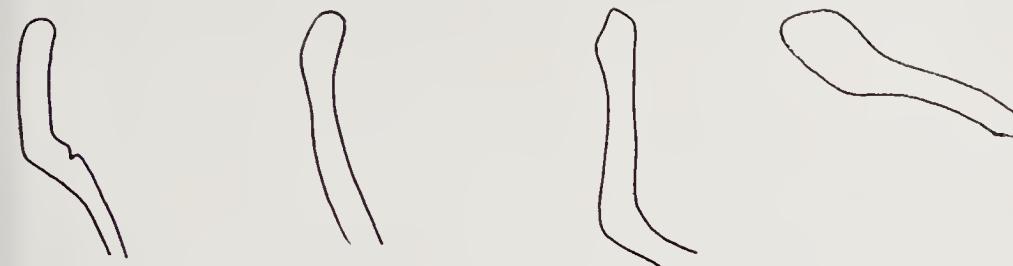
Thickness: 3 to 4.5 mm.

Surface: smoothed, undecorated

Form: sherds indicate medium-sized vessels. A strap handle, having at its attachment with the lip 3 pinched nodes, is present in this ware.



Figure 70. SAND-TEMPERED WARE. Top Row: *O'Neal Plain*. Bottom Row: 1 *Hardin Complicated-Stamped* and 2 *Sauty Check-Stamped*.



### O'NEAL PLAIN

Figure 71. Rim profiles, sand-tempered ware from the Bessemer Site.  
Rim interiors to the left.

#### SAUTY CHECK-STAMPED—

This type is identical to *O'Neal Plain*, except for a check-stamped decoration. Five sherds are stamped with large diamond-shaped checks  $\frac{1}{4}$  inch in diameter, and the others are stamped with small checks  $\frac{1}{8}$  inch in diameter. One of the small-checked sherds has a row of punctations which was applied after stamping.

#### HARDIN COMPLICATED-STAMPED—

This type is represented by one badly weathered sherd. The sherd is small, but it indicates concentric circles as the stamped design motif.

#### Limestone-Tempered Ware

*General Description.* Hardness of the limestone-tempered ware varies from 1.5 to 2.5. Because of leaching, the surface of the limestone-tempered ware is softer than the core. Tempering material makes up from 20 to 35 per cent of the mass, and consists of small fragments of pulverized limestone 1 to 2 mm. in diameter. Limestone is partially leached out of some sherds, leaving small, angular holes within the sherd and on the surface. Interior surfaces are smoothed.

*Vessel Forms Represented.* All of the limestone-tempered sherds suggest large vessels.

*Decorative Types.* Detailed descriptions of decorative types represented in limestone-tempered ware from the Bessemer Site follow.

*LONG BRANCH FABRIC-IMPRESSED--*

Paste: Texture—mediumly coarse

Color—reddish brown

Thickness: 5 mm.

Surface: exterior, fabric-impressed; plaited wicker fabric employed.



Figure 72. LIMESTONE-TEMPERED WARE. Top Row: *Pickwick Complicated-Stamped* (concentric circles). Bottom Row: 2 *Pickwick Complicated-Stamped* (concentric diamonds) and 1 *Long Branch Fabric-Impressed*.

Form: The one sherd representing this type indicates a moderately large vessel.

*PICKWICK COMPLICATED-STAMPED—*

The five sherds representing this type are identical to *Long Branch Fabric-Impressed*, except in the decoration. They are badly weathered, but four sherds show a stamped design made up of a series of concentric diamonds. Also representing this type is a fragmentary portion of a large, straight-sided vessel having a conoidal base and decorated with a stamped design made up of concentric circles.



## CHAPTER VI

## CONCLUSIONS

## Culture Pattern and Phase

Examination of the archaeological evidence places the Bessemer Site in the Middle Phase of the Mississippi Pattern, or in the late prehistoric period. The following tables list determinants of that pattern and phase and indicate presence or absence of such determinants at the Bessemer Site.

## Determinants of the Mississippi Pattern\*

Determinants	Presence at Besse- mer Site
<b>BURIALS—</b>	
(1) Predominantly extended .....	x
(2) Often multiple in type .....	x
<b>GRAVE GOODS—</b>	
(3) Abundant, or moderately so, and include chiefly pottery and objects of shell, bone**, copper .....	x
<b>CHIPPED STONE ARTIFACTS—</b>	
(4) Use of small, flat flakes for projectile points .....	x
(5) Knives with triangular blades .....	x
(6) Secondarily chipped edges .....	x
<b>POLISHED STONE ARTIFACTS—</b>	
(7) Celt .....	x
(8) Chunkey stone or discoidal .....	x

\*From *Rediscovering Illinois*, by Fay-Cooper Cole and Thorne Deuel, Table 1, p. 210. Data rearranged to facilitate comparison.

\*\*No bone artifacts as burial associations at Bessemer Site.

Determinants of the Mississippi Pattern—*Continued*

Determinants	Presence at Bessemer Site
OTHER ARTIFACTS—	
(9) Bone, shell, copper, and clay furnished material for large proportion of implements and ornaments .....	x
(10) Equal-armed pipe and its variants in clay or stone .....	
POTTERY—	
(11) Flattened globular pottery vessels .....	x
(12) Generally shell- or bone-tempered*** .....	x
(13) Globular or modified base .....	x
(14) Variety of shapes, sizes, surface treatment .....	x
(15) Handles or secondary features generally present .....	x

\*\*\*50.48 per cent of the pottery found at the Bessemer Site is shell-tempered, and 47.66 per cent is clay-grit-tempered. There is a possibility that the shell and clay-grit ware may have been contemporaneous (see page 108). To date no bone-tempered pottery has been found in Alabama.

## Determinants of the Middle Phase of the Mississippi Pattern\*

Determinants	Presence at Bessemer Site
DOMICILIARY—	
(1) Truncated pyramidal mounds .....	x
(2) Houses with rectangular floor outlines .....	x
(3) Wattle-and-daub house walls .....	x
POTTERY—	
(4) Two or more wares present .....	x

\*Cole, Fay-Cooper, and Deuel, Thorne, *op. cit.*, modification of Table 2, p. 215.

Determinants of the Middle Phase of the Mississippi Pattern—*Continued*

Determinants	Presence at Bessemer Site
(5) Common occurrence of effigy, beaker, plate, and other specialized forms	x
(6) Designs commonly include bands or chains of hachured triangles, arches, scrolls, and spirals	x
(7) Narrow trailing and incising (while clay is plastic) scratching, etching, etc. (after drying or firing), are the chief techniques of decoration	x
<b>ARTIFACTS—</b>	
(8) Pottery trowels	x
(9) Equal-armed pipe in varieties other than the projecting stemmed	
(10) "Awl-sharpeners"	
(11) The employment of marine shells, cut marine shells and pearls** for personal adornment	x

\*\*No pearls found at the Bessemer Site.

Of the fifteen determinants of the Mississippi Pattern all are present at the Bessemer Site except "the equal-armed pipe and its variants in clay and stone". Of eleven determinants of the Middle Phase of the Mississippi Pattern all are present at the Bessemer Site but "the equal-armed pipe in varieties other than the projecting-stemmed", and "awl sharpeners".

#### Aspect and Focus

Placement of the Bessemer Site in a definite aspect and focus is pending excavation of additional isolated Mississippian sites in Alabama, and further comparison of Mississippian sites in Alabama with those in adjacent states.

The Bessemer Site is closely related to Mississippian levels of sites recently excavated in the Tennessee Valley, and even

more closely related to Moundville.<sup>1</sup> It is especially similar to Moundville in the high percentage of black-filmed ware found as burial associations, and in such unusual vessel forms as the beaker and eccentric bowl (Vessel Nos. 7 and 13, described in *Chapter V*). The decoration exhibited by the latter vessel—engraved lines filled with hematitic paint—is found on a number of vessels from Moundville. A variation of this decorative type has been found on one shell-tempered sherd from the Tennessee Valley.<sup>2</sup> The close relationship between the Bessemer Site, Moundville, and Middle Mississippian levels of Tennessee Valley sites is shown in the following comparative trait list:

#### Composite Trait List

##### Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer\*

Traits	Moundville	Mississippian levels, Tennessee Valley Sites	Bessemer
<b>MOUND—</b>			
1. Rectangular earth mounds, truncated pyramid type	x	x	x
a. served as platforms for houses	x	x	x
b. have ramps constructed of earth	x	x	x
c. contain incidental burials	x	x	x
d. have surrounding village sites	x	x	x
2. Conoidal burial mounds associated with domiciliary mounds	x	x	x

\*The 6 limestone-tempered pottery sherds, 16 stemmed projectile points and 1 side-notched projectile point, from Bessemer, have not been included in this trait list.

<sup>1</sup>An extensive Mississippian site on the Warrior River in West-Central Alabama.

<sup>2</sup>Found at Site Ja<sup>o</sup>101, a domiciliary mound described by William S. Webb and Charles G. Wilder in "An Archaeological Survey of the Guntersville Basin in Northern Alabama" (manuscript).

Composite Trait List—*Continued*

Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer

Traits	Mound-ville	Mississippian levels, Tennessee Valley Sites	Bessemer
3. Ceremonial mound (structure indicating no use other than ceremonial) .....			x
<b>ARCHITECTURAL—</b>			
1. Houses in mounds and villages predominantly rectilinear .....	x	x	x
a. wall posts set in narrow non-convergent trenches to form walls .....	x	x	x
b. contain corner post holes .....	x	x	x
c. contain interior post holes .....	x	x	x
d. wattle walls covered with mud .....	x	x	x
e. shallow clay seats near wall .....	x	x	x
f. floors of prepared clay or sand .....	x	x	x
2. Occasional nonentrenched-post-hole rectilinear structure .....		x	x
3. Occasional nonentrenched-post-hole circular structure .....	x	x	x
4. Stockades surrounding village and/or mounds .....	x	x	
5. Small stockades or enclosing fence patterns .....			x
6. Rimmed fire basins .....	x	x	x
<b>BURIALS—</b>			
1. Burials predominantly extended .....	x	x	x
a. single burials, extended .....	x	x	x
b. multiple burials, extended .....	x	x	x
2. Partly flexed burials .....	x	x	x
a. single burials, partly flexed .....	x	x	x
b. multiple burials, partly flexed .....	x	x	x
3. Single burials, fully flexed .....	x	x	
4. Secondary burials (reburials) .....	x	x	x
a. single reburials .....	x	x	x
b. multiple reburials .....	x	x	x
c. single skull burials .....	x	x	x

Composite Trait List—*Continued***Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer**

Traits	Moundville	Mississippian levels, Tennessee Valley Sites	Bessemer
5. Burials in stone-lined graves		x	x
a. single burials in stone-lined graves		x	
b. multiple burials in stone-lined graves		x	x
6. Burials usually accompanied by grave goods	x	x	x
7. Burial offerings include:			
(1) animal teeth, perforated canine	x	x	
(2) awls, bone	x	x	
(3) beads, clay	x	x	
(4) beads, shell	x	x	x
(5) celts, greenstone	x	x	
(6) ceremonial axe, stone	x	x	
(7) ceremonial axe, copper	x	x	
(8) ceremonial disc, stone	x	x	
(9) cup, conch shell	x	x	
(10) discoidal, pottery	x	x	
(11) discoidal, stone	x	x	x
(12) ear ornaments, copper	x	x	
(13) ear ornaments, shell	x	x	
(14) galena (faceted balls)	x	x	
(15) hairpins, bone	x	x	
(16) knives, flint	x	x	
(17) mica	x	x	
(18) paint (red, yellow, white, green, black)	x	x	
(19) pebbles, small cache of	x	x	
(20) pendants, copper	x	x	
(21) pendants, or gorgets, shell	x	x	
(22) pipes, pottery	x	x	
(23) pipes, stone	x	x	
(24) plates or banners, copper	x	x	x
(25) projectile points, small triangular	x	x	
(26) pottery vessels, sand-tempered		x	
(27) pottery vessels, shell-tempered	x	x	x
(28) textile (preserved by copper)	x	x	x

Composite Trait List—*Continued*

Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer

Traits	Mound-ville	Mississip-pian levels, Tennessee Valley Sites	Bessemer
<b>POTTERY—</b>			
1. Pottery predominantly shell-tempered	x	x	x
a. ceremonial shell-tempered ware	x	x	x
b. utilitarian shell-tempered ware	x	x	x
c. black-filmed shell-tempered ware	x	x	x
d. effigy forms, shell-tempered ware	x	x	
(1) bat	x	x	
(2) bear	x	x	
(3) beaver	x		
(4) clam	x		
(5) duck	x	x	
(6) fish	x	x	
(7) frog	x	x	
(8) human	x	x	
(9) owl	x	x	
(10) rabbit	x		
2. sand-tempered ware*	x	x	x
3. clay-grit-tempered ware*	x	x	x
<b>ARTIFACTS—</b>			
1. Artifacts of bone	x	x	x
a. animal teeth, perforated canine	x	x	
b. awls	x	x	
c. beads	x	x	
d. cup, turtle shell	x	x	
e. fishhooks	x	x	
f. hairpins	x	x	
g. needles	x	x	
h. pendants	x	x	
i. projectile points, antler	x	x	
j. spoons	x		
2. Artifacts of clay or pottery			
a. beads, clay	x	x	
b. discoidal, pottery	x	x	x
c. pipes, pottery	x	x	
d. trowels, pottery	x	x	x

\*See page 108.

**Composite Trait List—Continued****Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer**

Traits	Mound-ville	Mississip-pian levels, Tennessee Valley Sites	Bessemer
3. Artifacts of copper	x	x	x
a. axes, ceremonial	x	x	
b. beads, rolled cylindrical	x	x	
c. breast plate, embossed	x		x
d. ear ornaments, circular, on wood	x	x	
e. fishhooks	x		
f. headdress	x	x	
g. pendants, embossed	x	x	
4. Artifacts of shell	x	x	
a. beads, columnella, disc, pearl	x	x	x
b. cup, conch shell	x	x	
c. ear ornaments	x	x	
d. mussel shell, perforated	x	x	
e. pendants or gorgets	x	x	
5. Artifacts of stone			
a. awl sharpeners	x	x	
b. axes, ceremonial	x	x	
c. "boat stones"	x	x	
d. celts, polished greenstone	x	x	x
e. discoidals	x	x	x
f. discs, ceremonial, large, usually notched	x	x	
g. drills	x	x	
h. galena (faceted balls)	x	x	
i. hammer or "pecking" stones	x	x	x
j. knives, flint	x	x	
k. mortars	x	x	
l. lapstones	x	x	x
m. obsidian, worked	x		
n. pestle	x	x	x
o. pipes, equal-armed or "elbow"	x	x	
p. pipes, effigy	x	x	
q. projectile points, small triangular	x	x	x
r. whetstones	x	x	x
MISCELLANEOUS—			
1. Dog Burial	x	x	x

Composite Trait List—*Continued*

Moundville, Mississippian Levels of Tennessee Valley Sites, and Bessemer

Traits	Mound-ville	Mississip-pian levels, Tennessee Valley Sites	Bessemer
2. Charred Corncobs	x	x	x
3. Matting	x	x	x
4. Mica	x	x	
5. Paint	x	x	x
a. red	x	x	x
b. yellow	x	x	x
c. white	x	x	
d. green	x	x	
e. black	x	x	
6. Pebbles, small cache of	x	x	
7. Stone pavements		x	x
8. Textile (preserved by copper)	x	x	x

*Anomalous Middle Mississippian Traits*

Traits which are not generally regarded as Middle Mississippian, but which are found in definite association with Middle Mississippian material at Bessemer, are:

small stockades	2
circular post-hole patterns	2
rectangular, nonentrenched post-hole pattern	1
prepared clay floors	2
stone pavement	1

Stockades are common to the Middle Mississippian Phase, but those found at Bessemer are smaller than most of those which have been reported up to the present date. Circular post-hole patterns are typical of the *Upper* Mississippian Phase, but have also been found in Middle Mississippian levels of sites recently excavated in the Tennessee Valley. Rectangular, nonentrenched post-hole patterns, as well as prepared clay floors, have also been found in Middle Mississippian levels of the Tennessee Valley. Stone pavements associated with mound bases have been found in the Ten-

nessee Valley<sup>1</sup>, and also in Illinois and Ohio<sup>2</sup>, but, as far as we know, no pavement so large as that at the Bessemer Site has been reported.

#### *Traits Other Than Mississippian*

The only "Woodland" traits found at the Bessemer Site are 6 limestone-tempered pottery sherds, 1 side-notched projectile point, and 16 stemmed projectile points.

#### *Significance of the Clay-Grit- and Sand-Tempered Pottery*

The possibility that shell-tempered ware, some clay-grit-tempered ware, and some sand-tempered ware may be contemporaneous is suggested by the following considerations:

- (1) Much of the clay-grit-tempered ware, as well as some of the sand-tempered ware, from the Tennessee Valley and South Alabama is identical to shell-tempered ware in form and surface finish. *Figure 73* shows the similarity of the Bessemer clay-grit-, sand-, and shell-tempered ware.
- (2) In Jackson County, Alabama, 9 sand-tempered vessels were found as burial associations accompanying typical Middle Mississippian burials and artifacts.<sup>3</sup>

Heretofore clay-grit-tempered ware found in levels containing both "Woodland" and Mississippian material has been classified arbitrarily as "Woodland". The further excavation of isolated horizons (either "Woodland" or Mississippian) should clarify the relationship of the clay-grit and shell-tempered wares in the Southeast.

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<sup>1</sup>Webb, William S., "An Archaeological Survey of the Norris Basin in Eastern Tennessee", *Bureau of American Ethnology, Bulletin 118*, pp. 63, 186.

<sup>2</sup>Thomas, Cyrus, "Archaeological Areas and Distribution Types", *Bureau of American Ethnology, Twelfth Annual Report*, pp. 535, 568.

<sup>3</sup>At Site Ja<sup>v</sup>180A, a small burial mound associated with a domiciliary mound, and Site Ja<sup>v</sup>27, a Mississippian village, described by William S. Webb and Charles G. Wilder, *op. cit.*



Figure 73. Bessemer Site sherds illustrating morphological similarity of clay-grit-, sand-, and shell-tempered pottery. Top Row: sand-, shell-, and clay-grit-tempered, noded strap handles. Bottom Row: sand-, shell-, and clay-grit-tempered rim sherds.

#### *Ethnological Note*

Regarding the ethnology of the region surrounding the Bessemer Site, Dr. John R. Swanton makes the following statement<sup>1</sup>:

In later historic times there were several Creek settlements along Cahawba River [*Cahaba*, see Figure 1] and in the territory adjoining, but these were mere camps or temporary settlements apart from the main Creek centers of population.

The only other tribe I know of in this region was the Napochie encountered by an expeditionary force sent inland by Tristan de Luna in 1560. After reaching Coosa between Talladega and Tallasseehatchee Creeks on Coosa River they took part in an expedition, probably directed westward, against enemies called by the above name. They crossed a river which some have carelessly identified with the Mississippi but quite erroneously. Others have

<sup>1</sup>By correspondence, December 9, 1935.

thought it was the Tennessee but I believe that to have been too far away. The relations seem to indicate only a few days' travel. It may have been the Black Warrior, in which case your mound group might have been in the Napochie Country. This Napochie tribe was probably identical with the Napissa who afterwards joined the Chickasaws.

No evidence of white contact was found during the Bessemer excavation, and it is therefore assumed that the site was no longer a community locale at the time the protohistoric period merged into the historic.

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## INDEX

**Abrader**, ceremonial mound, 13, 14; measurements, 78; *photograph*, 79.

**Animal Bone**: near domiciliary mound, 49; *Hunting Complex*, 77.

**Beads**: bone, occurrence at Moundville and in Tennessee Valley, 105; clay, occurrence at Moundville and in Tennessee Valley, 105; copper, occurrence at Moundville and in Tennessee Valley, 106; shell, burial association in burial mound, 64, 72; measurements and *photograph*, 76; occurrence at Moundville, in Tennessee Valley, and at Bessemer, 104, 106.

**Beaker, pottery**: burial mound, 70; description, 87, 88, 89; Middle Phase determinant, Mississippi Pattern, 101; *Moundville Filmed* and *Moundville Filmed Incised* pottery types, 84; *photograph*, 86; similarity, Moundville and Bessemer pottery forms, 102.

**Benson Punctuated Pottery**: description, 92; number of sherds at Bessemer Site, 81; *photograph*, 93.

**Black Warrior River**: *See* **Warrior River**.

**"Boat Stone"**, occurrence at Moundville and in Tennessee Valley, 106.

**Bowl**: form indicated by rim sherds, 91, 94; *photographs*, 64, 66, 69, 86, 90; similarity, Moundville and Bessemer pottery forms, 102; whole vessels, 64, 65, 66, 68, 69, 82, 84, 87, 88, 89, 91.

**Brush-Roughened Pottery, San Souci Brushed**, 81, 92.

**Cahaba River**: Creek Indian settlements along, 109; in Jefferson County, Alabama, xii.

**"Cane-Brushed" Pottery**, 92.

**Cane, charred**: village area under ceremonial mound, 18; village area near domiciliary mound, 51.

**Celts**: burial mound, 70; ceremonial mound, 13, 14; domiciliary mound, 34; measurements, 78; Mississippi Pattern determinant, 99; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 106; *photograph*, 79.

**Center Post Holes**, *see* **Interior Post Holes**.

**Ceremonial Axe**, occurrence at Moundville and Tennessee Valley, 104, 106.

**Ceremonial Complex, Bessemer Site**:  
**Site**: burial mound, 71; burial offerings, 72; summary of, 75 ff.

**Ceremonial Disc**, occurrence at Moundville and Tennessee Valley, 104, 106.

**Charcoal**: ceremonial mound, 9-11, 13, 17; domiciliary mound, 42, 49.

**Charred Wood**: village area under ceremonial mound, 18; village area near domiciliary mound, 51.

**Check-Stamped Pottery**: description, 95; number of sherds at Bessemer Site, 81; *photograph*, 94.

**Chickasaw Indians**, occupation of Bessemer Site by, possibility of, 110.

**Chunkey Stone**, *see* **Discoidals**.

**Circular Structure Patterns**: "anomalous" Mississippian trait, 107; *Architectural Complex*, 71; description, 46, 53, 54; occurrence at Moundville, Tennessee Valley, and Bessemer, 103.

## INDEX—Continued

**Clay Floor:** "anomalous" Mississippian trait, 107; architectural feature, 72; near domiciliary mound, 50, 57; occurrence at Moundville, Tennessee Valley, and Bessemer, 103.

**Clay-Grit-Tempered Pottery:** contemporaneousness with other wares, possibility of, 100, 108; decorative types, 81; description, 91 ff.; number of sherds at Bessemer Site, 80; occurrence at Moundville, Tennessee Valley and Bessemer, 103; *photograph*, 93; rim profiles, 93.

**Clay Seat:** architectural feature, 72; occurrence at Moundville, Tennessee Valley and Bessemer, 103; village area near ceremonial mound, 14, 17; village area near domiciliary mound, 51.

**Coiling Fractures** apparent on pottery vessel, 89.

**Cole, Fay - Cooper and Deuel, Thorne,** quoted, *see Rediscovering Illinois*.

**Columella Beads:** burial association in burial mound, 64, 72; measurements and *photograph*, 76; occurrence at Moundville, Tennessee Valley and Bessemer, 106.

**Complicated-Stamped Pottery:** description, 95, 97; number of sherds at Bessemer Site, 81; *photographs*, 94, 96.

**Concentric Circles:** decoration on *Moundville Filmed Incised* pottery, 84; decoration on *Pickwick Complicated-Stamped*, 97; *photographs*, 85, 97.

**Conch-Shell:** beads, *see Columella Beads*; cup, occurrence at Moundville and Tennessee Valley, 104, 106.

**Contemporaneousness of Clay-Grit-, Sand- and Shell-Tempered Pottery,** possibility of, *see Clay-Grit-Tempered Pottery*.

**Contracting Stem,** projectile point, definition of, *footnote*, 77.

**Coosa,** historic town, ethnological note, 109.

**Coosa River,** near town of Coosa, ethnological note, 109.

**Copper Plates or Banners,** *see Plates, copper*.

**Cord-Marked Pottery:** description, 92; number of sherds at Bessemer Site, 81; *photograph*, 93.

**Corncob, charred:** *Agricultural Complex*, 77; ceremonial mound, 23; occurrence at Moundville, Tennessee Valley and Bessemer, 107.

**Corner Post Holes:** example of, typical structure pattern, 36; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Cranial Indices,** Bessemer skeletal material, *tabulation*, 74.

**Cranial Measurements,** Bessemer skeletal material, *tabulation*, 73.

**Creek Indians,** settlements of near Bessemer Site, ethnological note, 109.

**Culture Pattern,** Besesmer Site, 99, 101.

**Cup:** *conch shell*, occurrence at Moundville and Tennessee Valley, 104, 106; *turtle shell*, occurrence at Moundville and Tennessee Valley, 105. *See also Beaker*.

**Decorative Types, Bessemer Site Pottery:** clay-grit-tempered ware, 91 ff.; limestone-tempered ware, 96, 97; shell-tempered ware, 82 ff.; sand-tempered ware, 94, 95; *tabulation*, 81.

## INDEX—Continued

**Deer Bone, Hunting Complex**, 77.

**DeLuna, Tristan**, early explorer, ethnological note, 109.

**Determinants of the Middle Phase of the Mississippi Pattern**, adapted from *Rediscovering Illinois, tabulation*, 100, 101.

**Determinants of the Mississippi Pattern**, adapted from *Rediscovering Illinois, tabulation*, 99, 100.

**Disc, stone**, ceremonial, occurrence at Moundville and Tennessee Valley, 104, 106.

**Discoidals: Burial Complex**, 72; burial mound, 64; *Ceremonial Complex*, 75, 76; ceremonial mound, 13; occurrence at Moundville Tennessee Valley, and Bessemer, 104, 105, 106; *photograph*, 76.

**Dog Burial**: under ceremonial mound, 14, 21, 23; occurrence at Moundville, Tennessee Valley and Bessemer, 106; *photograph*, 22.

**Dolomite, Ketona**: stone heap under domiciliary mound, 46; stone-lined grave near ceremonial mound, 21; stone pavement of ceremonial mound, *footnote*, 7.

**Drill, stone**, occurrence at Moundville and Tennessee Valley, 106.

**Ear Ornament**: copper, occurrence at Moundville and Tennessee Valley, 104, 106; shell, occurrence at Moundville and Tennessee Valley, 104, 106.

**Eccentric Vessel-Form**: description, 91; *illustration*, 90; Similarity to Moundville pottery, 102.

**Economic Complex, Bessemer Site**, summary of, 78, 79.

**Effigy Form**, pottery: Middle Mississippi Phase determinant, 101; occurrence at Moundville and Tennessee Valley, 105.

**Effigy Pipe**, *see* Pipe.

**"Enclosing Fence" Pattern**, *see Stockade Patterns*.

**Enclosure Pattern**, *see Stockade Patterns*.

**Engraved Pottery**: burial association in burial mound, 69; Middle Mississippi Phase determinant ("scratching", etc.), 101; *Moundville Filmed Hemagraded*, 81, 84, 91; *photograph*, 90; similarity to Moundville pottery, 102.

**Entrenched Post Molds**, *see Post Holes*.

**Equal-Armed Pipe**, *see Pipes*.

**Ethnology, Bessemer Site region**, comments by Swanton, 109, 110.

**Excavation Method, Bessemer Site**: burial mound, 60; ceremonial mound, 6; domiciliary mound, 26; structure patterns, 35.

**Expanding Stem**, projectile point, definition of, *footnote*, 77; *photograph*, 78.

**Extended Burials: Burial Complex**, 72; burial mound, 63-70; Mississippi Pattern determinant, 99; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Fabric-Impressed Pottery**, *see Long Branch Fabric-Impressed*.

**Filmed Ware**: *Moundville Filmed*, 83, 84, 87, *Moundville Filmed Hemagraded*, 84, 87, 89; number of sherds at Bessemer Site, 81; occurrence at Moundville, Tennessee Valley, and Bessemer, 105; *illustrations*, 85, 86, 88, 89, 90; similarity of Bessemer filmed ware to that of Moundville, 102.

## INDEX—Continued

**Fire Basins:** architectural feature, 72; domiciliary mound 34, 37-43, 45, 49, 57; under ceremonial mound, 14, 17; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Fire-Clouding on Pottery:** clay-grit-tempered ware, 92; sand-tempered ware, 94; shell-tempered ware, 82.

**Fishhook:** bone, occurrence at Moundville and Tennessee Valley, 105; copper, occurrence at Moundville, 106.

**Flexed Burials:** *Burial Complex*, 72; occurrence at Bessemer Site, 10-13, 63, 65, 67, 68; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Flutes,** as pottery decoration: *illustration*, 88; on shell-tempered vessel, 89.

**Focus,** placement of Bessemer Site in, 101.

**Freshwater Shell,** *see* Shell.

**Furniture Supports,** possibility of, *see* Interior Post Holes.

**Galena,** faceted balls, occurrence at Moundville, and Tennessee Valley, 104, 106.

**Globular Jar:** clay-grit-tempered ware, 91; Mississippi Pattern determinant, 100.

**Grid System of Excavating,** *see* Excavation Method.

**Grid, wire,** used for drawing profiles, 6, 7.

**Guntersville Basin, Archaeological Survey of,** manuscript by William S. Webb and Charles G. Wilder, *footnote* regarding pottery decoration, 102, 108.

**Hachured Triangle,** design on pottery, Middle Phase determinant, Mississippi Pattern, 101.

**Hairpin, bone,** occurrence at Moundville and Tennessee Valley, 104, 105.

**Hammerstone,** occurrence at Moundville, Tennessee Valley and Bessemer, 106. *See also* Pecking Stone.

**Handles, pottery:** loop, 83, 92; strap, 83, 87, 92, 94, 109.

**Hardin Complicated-Stamped Pottery;** description, 93, 95; number of sherds at Bessemer Site, 81; *photograph*, 94.

**"Head Dress", copper:** occurrence at Moundville and Tennessee Valley, 106. *See also* Plates, copper.

**Hemagraved Ware:** definition of, *footnote*, 81; hemagraved vessel, description and *photograph*, 90, 91; *Moundville Filmed Hemagraved*, 84.

**Hematitic Paint:** used on Moundville and Bessemer pottery, 102; used on *Moundville Filmed Hemagraved*, 81 (*footnote*), 84, 91. *See also* Ochre and Paint.

**Hoe, greenstone:** from near ceremonial mound, 14; measurements, 78.

**Hunting and Agricultural Complex, Bessemer Site,** summary of, 77, 78.

**"Incidental Burials",** in domiciliary mounds, Moundville, Tennessee Valley and Bessemer, 102.

**Inclusive Burials at Bessemer Site:** burial mound, 63, 64, 65; ceremonial mound, 12, 13.

**Incised Ware,** Middle Phase determinant, Mississippi Pattern, 101. *See also* Moundville Incised and Moundville Filmed Incised.

## INDEX—Continued

**Interior Post Holes**, in typical structure pattern, 36.

**Intrusive Burials**, at Bessemer Site, burial mound, 63, 68.

**Jackson County, Alabama**: Site Ja<sup>v</sup>101, *footnote*, 102; Sites Ja<sup>v</sup>180A and Ja<sup>v</sup>27, *footnote*, 108.

**Jar, pottery**: ceremonial mound, 12, 87; form indicated by rim sherds, 91, 94; lobed jar, 83, 85.

**Jasper**: projectile point, 77; scraper, 79.

**Jones Valley**, location of Bessemer Site, 1.

**Ketona Dolomite**, *see* Dolomite.

"Knob", ceremonial mound, 5 ff.

**Koger Island Physical Type**, represented at Bessemer Site, 75.

**Limestone**: bedrock, geology of Bessemer Site region, 2. *See also* Dolomite.

**Limestone-Tempered Pottery**: decorative types, 81; description, 95, 96, 97; number of sherds at Bessemer Site, 80; omitted from trait list, 102; photograph, 96; "Woodland" material at Bessemer Site, 77 (footnote), 108.

**Lobed Jar**, *see* Jar.

**Long Branch Fabric-Impressed Pottery**: description, 96; number of sherds at Bessemer Site, 81; photograph, 96.

**Loop Handles**, *see* Handles.

**Loops or Scrolls**: decoration on *Moundville Filmed Incised* pottery, 84; Middle Phase determinant, Mississippi Pattern, 101.

**Manganese**: concretions in domiciliary mound, 30; nodules in sand-tempered pottery, 93.

**Marine Shell**, *see* Shell.

**Matting**: adhering to copper plate, 77; occurrence at Moundville, Tennessee Valley, and Bessemer, 107. *See also* Textile.

**McKee Island Punctuated Pottery**: description, 83; number of sherds at Bessemer Site, 81.

**McKelvey Plain Pottery**: description, 92; number of sherds at Bessemer Site, 81; photograph, 93; rim profiles, 93.

**Measurable Skeletal Material** from Bessemer Site, 12, 65, 73-75.

**Mica**, occurrence at Moundville and Tennessee Valley, 104, 107.

**Micromya lienosa Conrad**, freshwater shell at Bessemer Site, 76.

**Middle Phase, Mississippi Pattern**: determinants of, *tabulation*, 100, 101; placement of Bessemer Site in, 99, 101.

**Mississippi Pattern**: determinants of, *tabulation*, 99, 100; placement of Bessemer Site in, 99, 101.

**Mississippi River**, mentioned in ethnological note, 109.

**Mississippian Levels, Tennessee Valley Sites**: "anomalous" Mississippian traits, 107; clay-grit-and sand-tempered pottery, 108; composite trait list, 102-107; relation of Bessemer Site to, 101, 102.

**Mississippian Projectile Points**: burial mound, 70; ceremonial mound, 13; under ceremonial mound, 14; near domiciliary mound, 45; measurements and photographs, 77, 78; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 106.

## INDEX—Continued

**Morphological Similarity, clay-grit-, sand-, and shell-tempered pottery,** 108, 109.

**Mortars**, occurrences of, Moundville and Tennessee Valley, 106.

**Mound Complex at Bessemer Site**, summary of, 71.

**Mound Structure**: burial mound, 60 ff.; ceremonial mound, 7 ff.; domiciliary mound, 27 ff.

**Moundville Filmed Pottery**: description, 83, 84; number of sherds at Bessemer Site, 81; photograph, 85; rim profiles, 88; whole vessels, 81, 87.

**Moundville Filmed Hemagraded Pottery**: description, 84; photograph, 90; whole vessel, 91.

**Moundville Filmed Incised Pottery**: description, 84; number of sherds at Bessemer Site, 81; photographs, 85, 86; rim profiles, 88; whole vessels, 87, 89.

**Moundville Incised Pottery**: description, 83; number of sherds at Bessemer Site, 81; photograph, 85; rim profiles, 88.

**Moundville**, relation of Bessemer Site to, 102 ff.

**Mulberry Creek Cord-Marked Pottery**: description, 92; number of sherds at Bessemer site, 81; photograph, 93.

**Multiple Burials**: *Burial Complex*, 72; occurrence at Bessemer Site, 63-65, 68; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Napissa Indians**, probably identical with Napochie, 110.

**Napochie Indians**, occupation of Bessemer Site by, possibility of, 109, 110.

**Needles, bone**, occurrence at Moundville and in Tennessee Valley, 105.

**Nodes, on pottery handles**: *McKelvey Plain*, 92; *O'Neal Plain*, 94; photographs, 85, 93, 94, 109; *Warrior Plain*, 83.

**Norris Basin, Archaeological Survey of**, *B.A.E. Bulletin* 118, by William S. Webb, footnote regarding stone pavement, 108.

**Obsidian**, worked, occurrence at Moundville, 106.

**Ochre, red and yellow**: *Ceremonial Complex*, 75; ceremonial mound, 13, occurrence at Moundville, Tennessee Valley and Bessemer, 104, 107.

**O'Neal Plain Pottery**: description, 94; number of sherds at Bessemer Site, 81; photograph, 94; rim profiles, 95.

**Paint**: filmed ware, 84; hemagraded ware, 81, 84, 91; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 107.

**Pearls**: occurrence at Mississippian sites, 101; occurrence at Moundville and Tennessee Valley, 106.

**Pebbles**, cache of, occurrence at Moundville and Tennessee Valley, 104, 107.

**"Pecking Stone"**: occurrence at Moundville, Tennessee Valley and Bessemer, 106; pestle used as, 79.

**Pendants**, occurrence at Moundville and in Tennessee Valley, 104, 106.

**Pestle**: ceremonial mound, 13; measurements 79; occurrence at Moundville, Tennessee Valley and Bessemer, 106.

**Phase Determinants, Middle Phase, Mississippi Pattern**, 101, 102.

## INDEX—Continued

**Physical Anthropological Study,** Bessemer Site skeletal material, 72-75.

**Physical Type**, typical for Bessemer Site, 75.

**Pickwick Basin, Archaeological Survey of**, *B.A.E. Bulletin* 129 (in press) by William S. Webb and David L. DeJarnette, *footnote* regarding "Koger Island" physical type, 75.

**Pickwick Complicated-Stamped Pottery**: description, 97; number of sherds at Bessemer Site, 81; *photograph*, 96.

**Pipes**: equal-armed or "elbow" as Middle Phase determinant, Mississippi Pattern, 101; **stone and pottery pipes**, occurrence at Moundville and Tennessee Valley, 104, 105, 106.

**Plaited Wicker Fabric**, used on *Long Branch Fabric-Impressed* pottery, 96.

**Plates, copper**: burial association in burial mound, 66; measurements and *photograph*, 77, 76; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 106.

**Plates, pottery**, *Moundville Filmed* and *Moundville Filmed Incised*, 84.

**Pleurobema hagleri Frierson**, freshwater shell at Bessemer Site, 76.

**Post Holes**, as distinguished from post molds, 15 (*footnote*), 35.

**Post Molds**, *see Post Holes*.

**Pottery Complex**: composite trait list, 105; summary of at Bessemer Site, 79 ff.

**Profile**: burial mound, 60, 62; ceremonial mound, 5, 7, 11; domiciliary mound, 27; village area near domiciliary mound, 44.

**Projectile Points**: burial mound, 70; ceremonial mound, 13, 14; domiciliary mound, 45; measurements and *photographs*, 77, 78; Mississippi Pattern determinant, 99; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 105, 106; "Woodland", 102 (*footnote*), 108.

**Punctated Ware**: *Benson Punctated*, 92, 93; *McKee Island Punctated*, 83; number of sherds at Bessemer Site, 81.

**Quartz and Quartzite** projectile points, 77.

**Ramp**: domiciliary mound, 28, 29, 30, 38; *Mound Complex*, 71; occurrence at Moundville, Tennessee Valley and Bessemer, 102.

**Reburials**: *Burial Complex*, 72; burial mound, 64, 65; ceremonial mound, stone-lined grave, 21, 22; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Rectangular Structure Pattern**: Middle Phase determinant, Mississippian pattern, 100; non-entrenched rectangular as "anomalous" Middle Mississippian trait, 107; occurrence at Moundville, Tennessee Valley and Bessemer, 103; typical pattern at Bessemer Site, 36.

**Rediscovering Illinois**, by Fay-Cooper Cole and Thorne Deuel, *quoted*: Mississippi Pattern and Middle Phase determinants, 99, 101; "wall-trench" rectilinear pattern, 72.

**Rim Profiles**: clay-grit-tempered ware, 93; sand-tempered ware, 95; shell-tempered ware, 88.

**INDEX—Continued**

**Roof Supports**, possibility of, *see Interior Post Holes.*

**San Souci Brushed Pottery**: description, 92; number of sherds at Bessemer Site, 81, 92; photograph, 93.

**Sand-Tempered Pottery**: contemporaneity with other wares, possibility of, 108; decorative types, 81; description, 93 ff.; number of sherds at Bessemer site, 80; occurrence at Moundville, Tennessee Valley and Bessemer, 105; photograph, 94; rim profile, 95.

**Sauty Check-Stamped Pottery**: description, 95; number of sherds at Bessemer Site, 81; photograph, 94.

**Scraper**, "end—" or "snub-nosed": found in village area near domiciliary mound, 45; measurements, 79.

**Scrolls**: decoration on *Moundville Filmed Incised* pottery, 84, 89; Middle Phase determinant of the Mississippi Pattern, 101.

**Secondary Burials**, *see Reburials.*

**Serrated Blade**, stemmed projectile point, 77.

**Shell**: artifacts, occurrence at Moundville, Bessemer and Tennessee Valley, 104, 106; **freshwater**, found in ceremonial mound, 11, 76; **marine**, 64, 76; Middle Phase determinant of Mississippi Pattern, 101.

**Shell Beads**, *see Beads.*

**Shell-Tempered Pottery**: burial associations, whole vessels, 12, 64-69; contemporaneity with other wares, possibility of, 108; decorative types, 81; description 82-91; Mississippi Pattern determinant, 100; number of sherds at Bessemer Site, 80; occurrence at Moundville, Tennessee Valley and Bessemer, 105; *photographs*, 13, 64, 66, 69, 85, 86; rim profiles, 88.

**Side-Notched Projectile Point**: domiciliary mound, 45; measurements, 78; "Woodland" trait, 102, 108.

**Skeletal Material** from Bessemer Site, measurable, 12, 65, 73-75.

**Skull Burial**: *Burial Complex*, 72; near burial mound, 68, 69; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

"**Slip**", on *Moundville Filmed*, *Moundville Filmed Incised* and *Moundville Filmed Hemagraded* ware, 84.

**Spoon, bone**, occurrence at Moundville, 105.

**Stamping** as pottery decoration: *Hardin Complicated-Stamped*, 95; number of sherds at Bessemer Site, 81; *photographs*, 94, 96; *Pickwick Complicated-Stamped*, 97; *Sauty Check-Stamped*, 95.

**Stockade Patterns**: "anomalous" Middle Mississippian trait, 107; *Architectural Complex*, 71, 72; *Ceremonial Complex*, 75; description, small circular, 44, 45, 47, 48, 54, 55, 56; description, small rectangular, 61, 62; occurrence at Moundville, Tennessee Valley and Bessemer, 103.

**Stone Artifacts**: burial mound, 70; ceremonial mound, 13, 14; domiciliary mound, 34, 45; measurements and *photographs*, 76, 77, 78, 79; occurrence at Moundville, Tennessee Valley and Bessemer, 104, 106.

**Stone Heap** under domiciliary mound, 45, 46.

## INDEX—Continued

**Stone-Lined Grave:** near ceremonial mound, 14, 21; *illustrations*, 15, 22; occurrence in Tennessee Valley and at Bessemer, 104.

**Stone Pavement:** “anomalous” Middle Mississippian trait, 107; ceremonial mound, 7, 8; *illustrations*, 8, 9, 11, 12; occurrence in Tennessee Valley and at Bessemer, 107.

**Strap Handles, pottery,** *see Handles*.

**Structure Pattern,** typical at Bessemer Site, 36.

**Swanton, Dr. John R.**, quoted regarding ethnology of Bessemer region, 109, 110.

**Talladega Creek**, near historic town of Coosa, ethnological note, 109.

**Tallaseehatchee Creek**, near historic town of Coosa, ethnological note, 109.

**Talley Mound Group**, former name of Bessemer Site, 1.

**T. C. I. Railroad** through ceremonial mound, 2, 3, 6.

**Tennessee River**, mentioned in ethnological note, 110.

**Tennessee Valley**, “anomalous” Mississippian traits in Tennessee Valley, 107; clay-grit-tempered and sand-tempered ware in Tennessee Valley, 108; composite trait list, Moundville, Tennessee Valley, Bessemer, 102-107; relationship of Bessemer physical type to “Koger Island” physical type, 75.

**Textile:** employed for pottery decoration, 96; preserved by copper, 66, 72, 77, 104.

**Thomas, Cyrus:** investigations of 1890, 3, 4, 6, 26, 32, 39; quoted regarding stone pavements in Illinois and Ohio, 108.

**Tines**, worn antler tips: burial mound, 70; *Economic Complex*, 78.

“Trailing”, decorative technique used on pottery: Middle Phase determinant, Mississippi Pattern, 101, *Moundville Incised*, 83.

**Trait List, composite**, Moundville, Middle Mississippian Levels of Tennessee Valley Sites, and Bessemer, 102-107.

**Trowel, pottery:** ceremonial mound, 13; measurements, 78; Middle Phase determinant of Mississippi Pattern, 101; occurrence at Moundville, Tennessee Valley and Bessemer, 105.

**Truncated Pyramidal Mound:** domiliary mound, 25; Middle Phase determinant of the Mississippi Pattern, 100; occurrence at Moundville, Tennessee Valley and Bessemer, 102.

**Turtle-Shell Cup**, occurrence at Moundville and in Tennessee Valley, 105.

**Upper Mississippi Phase**, circular structure patterns of, 107.

**Valley Creek:** at Bessemer Site, xii, 1-3; near burial mound, 59, 61; origin of limestone for stone pavement, 7; origin of sand, Fill No. 2 of ceremonial mound, 8.

**Warrior Plain Pottery:** description, 82; number of sherds at Bessemer Site, 81; *photographs*, 85, 86; rim profiles, 88; whole vessels, 81, 87, 88.

**Warrior River:** near Bessemer Site, xii, 1; in *Napocheic* territory, ethnological note, 110.

**Water Bottles:** burial associations, 65, 69; form represented in *Moundville Filmed* and *Moundville Filmed Incised* ware, 83, 84, 87-89.

**INDEX—Continued**

**Wattle-Daub House Walls:** burned clay showing wattle impressions, 72; Middle Phase determinant, Mississippi pattern, 100; occurrence at Moundville, Tennessee Valley, and Bessemer, 103.

**Webb, William S.,** *see Guntersville Basin, Norris Basin, Pickwick Basin.*

**Whetstone**, occurrence at Moundville, Tennessee Valley and Bessemer, 106. *See also Abrader.*

**Wilder, Charles G.,** *see Guntersville Basin.*

**"Woodland" Traits, Bessemer Site:** limestone-tempered ware, 80, 95-97; stemmed projectile points, 77, 78; summary of, 108.



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